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# Model MILITARY INTERNATIONAL

Issue 47 - March 2010  
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## **EIGHT WHEELS ACROSS IRAQ**

Trumpeter's 1:35 ASLAV-25  
meets Mouse House  
Enterprises



## **THE CURIOUS CASE OF CAPTAIN SHIN NAKAZAWA**


Fine Molds' 1:35 scale Type 97 Japanese Tank

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## NEW CAMOUFLAGE UNIFORM FOR BRITISH ARMED FORCES

**U**K Armed Forces are to be issued with combat clothing to improve their operational effectiveness. The new uniforms include the first change in 40 years to the British camouflage pattern.

Personnel in Afghanistan operate across a wide range of

environments - desert, woodland/jungle, compounds, crops, grassland and arid stone. They frequently move

through environments during their patrols, and often go through several in the course of one operation - but existing camouflage patterns are optimised for single environments. An MOD Urgent Operational Requirement (UOR) was authorised in April, and a programme of research has taken place since then to compare in-service camouflage with newly developed patterns and commercial off-the-shelf products.

A wide range of camouflage patterns and colours were trialled in the UK, Cyprus, Kenya and Afghanistan. The trials included visual comparisons, objective assessments of the time to detect the different camouflage patterns against different backgrounds,

and subjective user opinions on the efficacy of the performance. Crye's Multicam technology was found to be the best performing across the widest range of environments by a significant margin - reducing the chance of detection in mixed environments - and it was selected as the new UK camouflage. It will be known as Multi-Terrain Pattern (MTP).

Uniforms from the new pattern will be issued to all personnel deploying to Afghanistan from March 2010 and issued more widely to the UK Armed Forces from 2011. The rollout of new clothing will also coincide with a change in clothing cut, to provide coherence with new ballistic protection systems.



## MINIART HOG!

MiniArt continues its prolific run of new releases with the announcement of a WWII Harley-Davidson WLA Motorcycle in 1:35 scale. The model will feature substantial photo-etched content, including the wheel spokes. We will no doubt also see this released with various figure sets in the future too. Exciting stuff!



## NEW ITALERI WEBSITE

Italeri has launched a brand new website in both Italian and English. The site includes new release information and a full catalogue of all Italeri's products plus a Gallery of modellers' photos. The easy to remember website address is [www.italeri.com](http://www.italeri.com)



## PANZERWRECKS X OUT NOW

What mammoth Panzerjäger was found at Pilsen airfield? What made the vehicles found at Braunschweig so odd? What did the cupola of a Pz.Beeh.Wg.IV look like? Which prototype looked more like a duck-billed platypus than an AFV? How did the Flakpanzer 'Wirbelwind' prototype differ from the production vehicles? What ominous feature was photographed on a Pz.Kpfw.IV from Kampfgruppe 'Hudel' in April 1945. The answers to these and other questions are to be found in Panzerwrecks X, with 114 rare and unpublished large format photographs sourced from around the world. The tenth edition of this excellent series will be available by the time you read this.

Also available from the Panzerwrecks team is 'Sd.Kfz. for the Nebeltruppen' by Auerbach and Jentz. This 100 page book has 60 large format photos and 16 org charts. Price is £24.99/\$29.95.

More information may be found on the Panzerwrecks website [www.panzerwrecks.com](http://www.panzerwrecks.com)

## NEWS FROM FIREFLY BOOKS

Firefly Books will very soon be releasing 'To The Last Bullet'. Although there will be many more colour pages in this book, there will be no rise in the cover price.

As with 'The Panzers in the Bocage', Bison decals will be releasing sets of water-slide transfers as a cross promotional exercise. Following that Claude Gilonno will be back with a book on US Armour in Tunisia, a subject that not been widely covered in the past. This one will feature the very large, very clear photos, together with 5 pages of full colour.

Other projects on the drawing board include Ian Paterson's multi-part history of the British 7th Armoured Division entitled 'Long Road To Victory', Karl Berne is working on a book on the Battle of France - again using the snapshot photos taken by ordinary German soldiers - and of course the prolific Monsieur Gilonno with at least three other books.

All future Firefly books will return to the format of at least 4 centre pages of colour, with the outside back cover adding one to the total.

## GREAT WALL HOBBY NEW RELEASES

The Airbrush Company has announced several new releases from Lion Roar / Great Wall Hobby. These are a WWII German IR Night Vision set (£6.49 retail inc VAT), a resin tarp for Great Wall's 1:35 German SWS half-track and photo-etched upgrade parts for Great Wall's German SWS half-track.



L31925 RESIN TARP FOR SWS GENERAL CARGO VERSION



L31927 UPGRADE PE SET FOR SWS GENERAL CARGO VERSION



Sd.Kfz. for the Nebeltruppen



Created by William Auerbach and Thomas Jentz.  
For more information on the 'Sd.Kfz. for the Nebeltruppen' book, visit [www.panzerwrecks.com](http://www.panzerwrecks.com)





# Ground Hog

1:72 Sd.Kfz. 251/1

03173

The Sd.Kfz. 251/1 half-track was a medium armoured personnel carrier, about 16,000 of which were built from 1938 onwards. It was the main combat transport vehicle used by German mechanised infantry and was typically equipped with two MG42's with some later variants carrying Wurfrahmen 40 rocket launchers. These 28cm unguided artillery rockets were also known as "Infantry Stukas" by their panzergrenadier crews, while the vehicle itself was 5.8 m long and had a top speed of 50 km/h.

Here the 251/1 is authentically reproduced in fine detail with 171 individual parts. The easy-to-assemble chassis is complimented by injection moulded tracks and in addition to filigree tools the kit includes a complete Wurfrahmen 40 system with separate projectiles.

#### Model-details:

- Fine surface details
- Two MG42's
- True to the original Wurfrahmen 40 rocket launchers
- Separate rocket projectiles
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- Decals for two German versions

For more details on this brand new 1:72 scale model kit as well as the complete range of Revell products check out our International website at [www.revell.eu](http://www.revell.eu)

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**Build Your Dream!**



# Think Tank - The Type 97 Kai Shinhoto Chi-Ha Medium Tank in World War Two



This Type 89 Yi-Go is maintained in running condition at the Tsuchira tank museum in Japan. The design represents a transition from WWI tanks to more modern types in the 1930s. (Max Smith photo)

## THE TYPE 97 KAI SHINHOTO CHI-HA MEDIUM TANK IN WORLD WAR TWO

Bruce Culver begins his examination of the oft-neglected area of Japanese armour in the Second World War.

by Bruce Culver

In some ways, the history of Japanese armour in the Second World War seems contradictory. During the 1920s and 1930s, Japan undertook much experimentation in tank design and the development of vehicles and doctrine. Japan manufactured more tanks than most other nations during the 1930s (almost 3,500 total). Yet the majority of these armoured vehicles, influenced by British Vickers designs, were light tanks and tankettes that were too poorly armoured or armed to be useful against enemy tanks. Japanese doctrine developed along infantry support lines, and the light tanks and tankettes were quite useful

against enemy forces that had little or no armour.

Development of heavier tanks led to a number of prototypes reminiscent of WWI designs, with numerous small roadwheels in limited-travel suspensions. All of these were found unsuitable or too expensive to commit to production. For all the advanced work done on diesel engines to replace gasoline types, and new efficient suspensions, Japan in the 1930s was still a poor and largely agrarian country with limited industrial resources. Restraints on cost led to the preference for the light tanks and tankettes.

A new tank was designed and tested in the 1920s, based on

experience with tanks purchased from Britain and France after WWI, and influenced by the Vickers Mark C, to which it bore a family resemblance. It too had a WWI type suspension with nine road wheels in a limited-travel suspension, a rather high hull and a turret set forward. Intended as a light tank, the Type 89 was adopted in 1929 as the Type 89 Yi-Go (or I-Go). Reclassified as a medium tank due to its weight of 9.1 metric tonnes, it became the Type 89 Chi-Ro. It also pioneered a new asymmetric turret with an offset rear MG position. The hull and turret were riveted, and maximum armour thickness was only 17mm. The main armament was a low-velocity

57mm gun suitable for infantry support.

While production improvements were made continually, there were two models of the Type 89: the model A Ko with a gasoline engine, and the model B Otsu with the preferred diesel engine. In service, as an infantry support tank, the Type 89 served well against poorly equipped Chinese troops, and also in the earliest stages of WWII. However, Japanese tank units were badly mauled by more modern Soviet armour in Manchuria in 1939, and it was obvious newer designs would be needed. There was also an appreciation that the Type 89 Otsu was too slow to keep up with Japanese motorized





Type 97 Chi-Ha medium tank advancing through palm trees. Most Japanese light tanks could not penetrate heavy growth like this, and even the tall elephant grass found in parts of Asia forced the lighter tankettes to remain on the roads. (Bruce Culver)



This Type 97 Chi-Ha in Singapore was from Gen. Yamashita's 25th Army that took Singapore in February 1942. Japan's use of tanks in terrain the British thought impassable was a major cause of the British defeat in SE Asia. This vehicle is a command tank equipped with a radio, shown by the circular antenna on the turret. (Bruce Culver)

Many Japanese tank assaults were quickly defeated by superior US firepower. This Type 97 Chi-Ha of the 1st Independent Tank Company was destroyed by US Marine guns while attacking across the Matanika River on Guadalcanal. (NARA via Bruce Culver)

infantry units. Thus, work began on what would be the standard Japanese medium tank throughout WWII, and the only medium tank to see combat service.

Among the new tank designs Japan had produced was the Type 95 Ha-Go, a light tank weighing only 7 metric tonnes, but of modern design with a new simplified suspension consisting of simple rocking bogies sprung by horizontal external springs on the outer lower hull working through bell cranks. The rocking movement of the bogies equalised the pressure on the tracks and distributed the weight evenly. The new medium tank prototype selected for production was the Chi-Ha. It used the same basic layout as the Type 95 Ha-Go and the same suspension design, though the Chi-Ha had six road wheels per side instead of four. Development began in 1935, with prototypes delivered in 1937.

The Chi-Ha retained the low-

velocity Type 97 57mm gun of the Type 89B in an asymmetric turret similar to that on the Type 89, but with a lower silhouette. A 7.7mm Type 97 machine gun provided cover at the turret rear, and a second 7.7mm gun in the hull front was used by the bow gunner. The hull and turret armour was riveted together, and while the armour was not inadequate by the standards of the late 1930s, it was never increased during production of the basic 57mm armed tank. Armour thickness ranged from 33mm on the turret front to 26mm on the turret sides, 20mm for the hull front and rear plates, 9mm on the lower hull sides, 12mm for the hull top, and 8mm for the hull bottom. Weight was 15.8 metric tonnes, the top speed was 38 km/h, and maximum range on roads was 210 km. Production of the Chi-Ha with the 57mm gun totaled 1,162 vehicles.

Driven by a 170hp Mitsubishi V-12 air-cooled diesel engine, the

Chi-Ha performed well, but the limited power was a major factor in accepting the thin armour to save weight. The similar PzKpfw III German medium tank had almost 50% more power. The four man crew sat in a somewhat cramped interior with 100 rounds for the 57mm gun and 2745 rounds for the two 7.7mm machine guns.

Used as it was intended, as an infantry support tank against forces not having their own armoured units, the Chi-Ha performed well, and met the goals of the Japanese army. The 57mm gun was effective against most types of fortifications and the armour was sufficient to protect the crew from most infantry anti-tank weapons of the 1930s period. Chi-Has could keep up with the Type 95 Ha-Go light tanks, allowing coordinated operations.

In 1938-9, the Japanese were involved in several clashes along the border of China and Mongolia, leading to a number of skirmishes

and battles with the Russian armoured forces in Mongolia. In these engagements, the superior anti-tank weapons of the Russian army, especially a new 45mm high-velocity gun, shattered Japanese tank units with very heavy losses. The shorter range weapons of the Japanese tanks could not counter the Russian fire. In the worst clash, in early July 1939, along the Khalkin Gol (Halka River), some Japanese tank units lost over 40% of their vehicles, although most of these were recovered and repaired. Still, the losses and obviously inferior firepower of their own tanks convinced the Japanese to cease operations against Russian troops in Mongolia.

The Mongolian actions led to two developments by the Japanese. They produced a new Type 1 47mm high-velocity anti-tank gun, based on captured examples of the Russian 45mm weapon and study of the German Pak 36 3.7cm gun. And to upgrade the ►



# Think Tank - The Type 97 Kai Shinhoto Chi-Ha Medium Tank in World War Two



Two views of a Type 97 Chi-Ha dug in as a defensive pillbox. The poor armor protection and ineffective guns of Japanese tanks forced commanders to use their tank units as artillery support instead of a mobile force. After the dramatic but suicidal banzai attacks in the Marianas campaign, Japanese were more often



The US Marines captured many Japanese tanks in the Pacific battles. This Type 97 Kai Shinhoto Chi-Ha, taken in the Marianas campaign, shows the clean few lines that characterized this design. Many of the captured tanks, like this one, were in excellent condition. (NARA via Bruce Culver)



◀ tank fighting ability of their tank units, they developed a new turret for the Type 97 Chi-Ha. This was adapted from the design for the Chi-Ha's projected replacement, the Type 1 Chi-Ha, still in an early prototype stage. The new 47mm Type 1 gun was fitted, and there were some improvements made to the hull and engine deck; armor thicknesses were the same as the standard Chi-Ha. The new tank was designated Type 97 Kai (modified) Shinhoto (new turret) Chi-Ha. Full production started in early 1942 and continued into late 1943, when it was cancelled in favor of the later Type 1 Chi-Ha. Total production of the Shinhoto Chi-Ha was 930 examples, 300 of which were converted from standard Chi-Ha 57mm gun tanks. The Shinhoto Chi-Ha was the last Japanese medium tank built in really large numbers, and the last to see

combat service.

The first action involving the new tank was the final stage of the invasion of the Philippines, the capture of Corregidor. Some Type 97 Kai Shinhoto Chi-Has were sent to deal with the US M3 light tanks that had been impossible for the standard Chi-Ha to destroy. The use of tanks was a major reason Corregidor fell in May 1942; the American and Filipino defenders had no anti-tank weapons.

It is one of the ironies of WWII that the Japanese tank forces obtained their most famous and significant victories using obsolete or obsolescent tanks like the Type 95 Ha-Go light tank, and the Type 89B Chi-Ro and Type 97 Chi-Ha medium tanks, none of which was capable of fighting most allied armor of the period. Japanese tactics and daring resulted in stunning victories in Southeast

Asia, leading to the fall of Malaya, Singapore, and Hong Kong, followed in quick succession by the capture of most of the territories of the Southwest Pacific. In most of these campaigns, there were no significant armor battles, most of the nations in the Pacific not having armored forces. The few tanks in the Netherlands East Indies were poor export models from the west - no match for the Japanese tanks they faced.

A second irony is that the successes of the Japanese advance led to a shift to a defensive posture, to hold onto what they had taken. At the same time, constraints on budgets and industrial capacity led the Japanese high command to direct the vast majority of resources to the navy and the air forces, leaving the tank command to struggle on what was left. The war

against the US, and the subsequent separation from the European nations that had been influences on tank design, led to a lack of new designs and the need to develop new tanks based on the designs already available. All but the last tank models designed in Japan from 1941 onward were largely up-armoured and up-scaled versions of the Type 97 Kai Shinhoto Chi-Ha, and most self-propelled guns were built on the Chi-Ha. It proved to be an adaptable design, versatile and capable of further development.

Japanese production of most war materiel was considerably less than the Allies, and was dwarfed by the vast production output of the United States. From 1941 to 1945, the Japanese built only 5,495 tanks of all types, the majority of them in 1942-43. The third irony is that the later



up-gunned and up-armoured tank designs, those most capable of defeating the superior US tanks, were retained in Japan for the expected invasion, and thus never saw combat. The Type 97 Kai was the most advanced Japanese tank the Allies encountered in action, and technically it dated from the mid-1930s.

The Type 97 Chi-Ha served as the basis for many of the medium-heavy self-propelled guns built by Japan. The first model was a simple conversion of the Chi-Ha chassis to mount the Type 90 75mm field gun. The gun was in an open armoured shield set where the turret had been. This first model was called the Type 1 Ho-Ni I, and only 26 were made, all in 1942. The similar Ho-Ni II used a 100mm gun on the Chi-Ha chassis and the Japanese built 54 from 1942-45. The last major production model was the Type 3 Ho-Ni III, which carried the Type 90 75mm field gun in a closed casemate. It was intended to supplement the Type 3 Chi-Nu medium tank. Only 31 were completed and all were retained in Japan. A naval tank unit at the Sasebo arsenal converted a number of Type 97 Kai tanks by replacing the 47mm guns with 120 guns from submarines.

Several experimental vehicles were considered and one type, the Type 4 Ho-Ro, mounted a Type 38 150mm howitzer on the Chi-Ha chassis. Two were sent to the Philippines, where they were quickly destroyed with most of the other Japanese armour.

With the first battles in the Southwest Pacific, on Guadalcanal, Japanese tanks units had to contend with Allied tanks they could not destroy with most of the weapons they had. In some campaigns, tanks were used in banzai charges, often across open ground. The results were uniformly unsuccessful. On Peleliu, a formation of Type 95 Ha-Go light tanks with infantry carried in oil drums fastened to the rear decks attempted a charge on US Marine positions. The Marine tanks fired point-blank with limited effect until they realized their AP rounds were passing through the light armour without exploding. Using HE rounds, the Marine M4A2s blew apart the Ha-Gos so completely one Marine later said the best way to total the wrecked tanks was to "count the bogies and divide by four."

Japanese tank tactics evolved to accommodate the lack of anti-tank capability and the vulnerability of their thin armour. Tanks were often used in small groups to protect fortified positions, normally dug-in to make



This Type 97 Kai Shinhotō Chi-Ha, captured on Saipan in 1944, belonged to the executive officer of the 9th Tank Regiment on the island. This tank displays the most common camouflage scheme seen on Japanese tanks in the Pacific: a base of earth tan, called "parched grass" by the Japanese, and two additional colors, a willow green in the South Pacific, and a red-brown. The large majority of Japanese tanks of all types encountered in the Pacific fighting were painted in this system. Similar camouflage colors were used by the US for landing craft and Amtracs later in the war. (NARA)



A Type 97 Kai Shinhotō Chi-Ha being evaluated by US technical intelligence personnel in the Philippines. In order to release valuable information about enemy weapons as soon as possible, field evaluations were done before new designs were sent to the United States for detailed analysis. The evaluation included photos to identify new equipment or details not previously known. Again note the excellent condition of this captured tank. (Bruce Culver)

them more difficult targets. The Shinhotō Chi-Ha was often used to set up ambushes, as its 47mm high-velocity gun was capable of penetrating the M4 Sherman's side and rear armour. In the Philippines and on Okinawa, strategically placed Shinhotō Chi-Has could be difficult opponents, as a good field of fire allowed them to hold off Allied armour until knocked out.

The lack of any up-armouring on the Shinhotō Chi-Ha was its downfall. The US Army tested a captured Shinhotō Chi-Ha in the Philippines in 1945 against several US weapons. The 50 M2HB Browning MG could penetrate limited areas, including the lower hull side, at up to 50 yards; the standard rifle grenade could

penetrate every plate except the gun mantlet up to 75 yards; the 2.36" (57mm) bazooka could penetrate up to 100 yards; and the 37mm M6 anti-tank gun could penetrate all parts of the Shinhotō Chi-Ha up to 350 yards if the shot was at 90 degrees to the target. While these ranges appear to be very short, with the heavy jungle cover in most of the Pacific, truly long range shooting was much less common. The M4 Sherman's 75mm gun could penetrate the Chi-Ha at any likely range, out to well over 1,000 yards.

US forces met the Shinhotō Chi-Ha in four major campaigns: the Marianas, Philippines, Iwo Jima, and Okinawa. Primarily, the Japanese tanks were used in a

defensive mode. In the Marianas, Japanese tank units attempted several night-time banzai charges. All were unsuccessful, and resulted in the complete destruction of the attacking units. In the Philippines campaign, the Japanese never used more than 15-16 tanks in any one action, and on Iwo Jima, the tank commander was ordered to use most of his Shinhotō Chi-Has as dug-in pillboxes. These were reduced by attrition in very vicious fighting, and a final banzai charge by a reserve unit was crushed by bazooka fire. On Okinawa, the Japanese tank force totaled 27 machines (14 Shinhotō Chi-Has and 13 Type 95 Ha-Gos), facing eventually over 800 US tanks, primarily M4 Shermans. Most of ▶



# Think Tank - The Type 97 Kai Shinhoto Chi-Ha Medium Tank in World War Two



The major Japanese tank unit defending the Philippines was the 2nd Tank Division. It was well-equipped with over 200 tanks and a number of self-propelled guns. This Shinhoto Chi-Ha, seen in a captured Japanese photograph, has the usual three-color camouflage, but the extensive rear stowage here was rarely seen in Allied photos of captured or destroyed tanks. (NARA via Bruce Culver)

◀ the dug-in Japanese tanks were destroyed piecemeal and another late counterattack when the battle was already lost destroyed what was left of the Japanese armour on the island.

Attempts were begun in 1941 to improve the Type 97 Kai Shinhoto Chi-Ha. The next model was the Type 1 Chi-He. The Chi-He used the chassis of the Chi-Ha but the upper hull used 50mm armour for the redesigned front plate, and the hull now was primarily welded. The larger turret had 40mm of armour on the mantlet and was large enough to accommodate a loader, increasing the crew to five. The diesel engine developed 240 hp, providing a better power to weight ratio than the Shinhoto Chi-Ha. 120 rounds were carried for the main gun and over 4,000 rounds for the two 7.7mm machine guns. The maximum road speed was 44 km/h. Though hampered by the inadequate 47mm main gun, the Type 1 Chi-He would have been a more difficult adversary due to the heavier armour. Total production was 170 vehicles. The diversion of resources from the tank programs delayed production so long (until 1943) that by the time it ended, the high command decided to save the Chi-He for the defense of the Japanese home islands.

The last new tank developed on the Chi-Ha chassis was the Type 3 Chi-Nu. This model used a modified chassis of the Type 1 Chi-He with its heavier armour, but fitted a much larger turret to mount a modified Type 90 75mm field gun. 144 were produced.

Like the Type 1 Chi-He, the Type 3 Chi-Nu was retained for the defense of Japan against the anticipated Allied invasion, and never saw combat. With the

heavier armour of the Chi-He and the much more effective 75mm gun, the Chi-Nu would have been the most competent battle tank produced in Japan. Instead, the first Allied troops beginning the occupation in late 1945 found dozens of Chi-Nu medium tanks among the hundreds of armoured vehicles parked like parade ground exhibits at bases across Japan. ■



Most of the Japanese tanks in the Philippines were destroyed piecemeal in their fortified positions, but on several occasions, small groups would attack in the open trying to blunt Allied advances. This damaged Shinhoto Chi-Ha is in the usual three-color camouflage. While some units used elaborate markings, others carried none. The small unit actions in the Philippines would not have required extensive markings. (NARA via Bruce Culver)



In the summer of 1945, the Sasebo naval yard shops fitted a number of Shinhoto Chi-Ha tanks with 120mm submarine guns for use as support artillery. (NARA)





A number of self-propelled guns were built on the Type 97 Chi-Ha design; few were built in large numbers, and most were no more than a handful. This Type 4 Ho-Ro was a quick expedient design mounting a Type 38 150mm howitzer on the Chi-Ha chassis. Two were sent to the Philippines, where they were quickly destroyed. This example was photographed at Aberdeen Proving Ground after the war. (Bruce Cuiver)



The most advanced and capable Japanese tanks never saw combat, as they were retained for the final defense of the Japanese home islands. Here is a line-up of Type 3 Chi-Nu medium tanks, the last model based on the Chi-Ha chassis. The large turret mounted a modified 75mm Type 90 field gun, and the hull and turret were almost entirely welded. In the row of vehicles to the right are Type 3 Ho-Ni III self-propelled guns mounting the same weapon in a fixed casemate. These vehicles were in the 4th Tank Division on Kyushu. (NARA)



Due to shortages of vehicles and attempts to build up each armored unit, many tank formations had several types of tanks serving together. This group from the 4th Tank Division includes the Type 3 Chi-Nu and Type 97 Chi-Ha Shinhotō Chi-Ha in the first row, and in the second row, the Type 1 Chi-Ha and an old Type 97 Chi-Ha command tank. (NARA)



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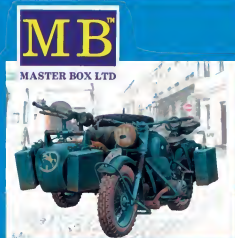
**HBB80350** 1:48 F-117B/E Aardvark



**HBB82428** 1:35 T26E4 Pershing Late Production



**HBB82454** 1:35 Chinese ZSL-92 IFV



**MA53528** 1:35 German Motorcycle with Photo-luch



**MA53548**  
1:35 Kradschützen: German Motorcycle Troops on the Move

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**PLU328** British Light Truck CS8 - Lyle



**PLU341** P.L.T.



**PLU343** Wheels for 1:43004



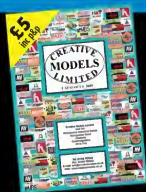
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1:35 Cobblestone Street Section (2 pc)



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**MIG72360**

1/72 Russian Industrial Lamp

**ICM**  
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**ICM72232**

1:72 ILM70F-2 German Rescue plane



1:72

**ICM72251**

1:72 3.7cm Pak 36 WWII German Anti Tank Gun

**MiniArt**



1:35

**MIN35050** British Staff Car w/Crew



1:35

**MIN35080** U.S. WWII Motorcycle WLA

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**MIN36033** Diorama with Farm Wall

**GERMAN STREET**  
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**MIN36037** German Street



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**Luke Pitt** builds Fine  
Molds' 1:35 scale Type 97  
Japanese Medium Tank.

# ***THE CURIOUS CASE OF CAPTAIN SHIN NAKAZAWA***

Overall shot of the unpainted model showing the placement of the Granth Line Granth Line round. 043 rivets on the turret and the Armory Conical Rivets (AG130) on the hull.



very high standard. The lower hull is moulded in as a plastic tub and has full underside detail present. The road wheels are very well detailed with the road wheel hubs showing superb detail. They are correct in both width and height. The drive sprockets are presented in two halves and have detail on both sides of each sprocket. The inner ring of hub bolts however, is noticeably undersized. The kit is supplied with full-length vinyl tracks. They have acceptable detail, but as this medium has its limitations, the guide tooth cutouts are only molded as depressions. The upside to this is that the tracks can be glued together with normal plastic cement and are painless.

The upper hull comes as a separate central superstructure plate with the sides included with the top plate separate. The rivet heads on the hull are better sized than on lower hull but are still a tad too small when comparing them to photos of the real vehicle. The front hull inspection hatches and rear side engine compartment doors are also separate parts. This results in the air outlet grills being included but are unseen when the model is complete.

The turret has the upper shell molded as one piece with separate rear panel. At the rear of the turret a separate escape hatch is included. There are separate grab handles for the hatches and the turret moulding features subtle weld seams on the top panel but the rivets on the sides are undersized when compared to photos. The cupola has six



Close-up of the hull front showing the metal tracks ATL-70 to good advantage and thinned front guards. Note also the 10 thou plastic strip on the edge of the guard.



Here we can see the Commander figure and thinned down hatch with details added.



The road wheels have been left off the middle bogie stations to allow for easier painting. Also note the thinned muffer guards and wire engine grab handles.



The driver's station has a plastic card insert to allow the top cover to be opened up.

**T**he Japanese Type 97 has always struck me as a well proportioned tank. I have always liked the camouflage and in some cases the extreme sag of the tracks. This inspiration began twenty years ago when I had a conversation with a Japanese work colleague, but more on that later.

When the Fine Molds kit was released a few years ago I decided to start building it straight away but, as so often happens, one thing lead to another and the model languished in my "to do" pile (or should I say tub) for well over two years. I decided a few months ago enough was enough and I set about to complete it.

#### WHAT'S IN THE BOX?

Fine Molds' 1:35 scale Type 97 is moulded in a medium green plastic over six sprues. Detail and fit of this kit, is, for the most part, to a





The front and rear road wheels were glued in place to ensure they all touch the ground (this is a weak point in the kit). Careful alignment of the road wheels is necessary here. The workable Frail metal tracks are a vast improvement over the flexible vinyl items supplied in the kit.



clear periscopes added to the insides that can be seen when the hatches are left open. On the roof the Commander's periscope is a separate part as is the MG mounting on the left side. The markings included are for a tank from the 7th Tank Regiment operating in 1942. The second option is from the 9th Tank Regiment, 5th Company operating in Saipan 1944. The third option is a tank from the 13th Tank Regiment in China. The fourth option is from the 8th Tank Independent Company operating on Luzon Island in 1945. The fifth decal option is a tank operating in the Chiba Tank School in Japan with the final option being a Tank operating with the 5th Tank Regiment Saitama in Japan 1945.

The model is a first class effort let down by average tracks and by noticeably undersized rivets on various locations on the hull and turret. Fine Molds continue to use a flexible material for the tracks. While some manufacturers have defined and improved this material to such a degree they are almost

on par with individual after market tracks, the ones supplied in this kit leave a lot to be desired. Overall though, the kit is well worth the purchase price and frankly is the only accurate version the latter Type 97 on the market today. Comparisons between this relatively new Fine Molds kit and the old Tamiya kit are inevitable. Given there is almost 25 years separating these kits one would consider there is no comparison

#### LUNCHTIME EPIPHANY

I guess the first thing I should do is address what prompted me to begin working on this model in the first place. Around 20 years ago I worked for a very large computer company and we were exporting routers to the Japanese market. We had a Japanese liaison officer (who basically did all the translation work). One lunchtime he came up to me as he noticed I was reading a modelling magazine

Nakazawa had been involved in tank operations in Manchuria were in 1938 he had managed to dispatch a Chinese Panzer I and CV33. His next assignment put him head to head with the Russians in the Mongolian border clash with Russia in 1939. When in command of an early Type 97 he had destroyed 3 Russian BA-6 armoured cars in rapid succession. His favored tactic was to lie in wait for his prey in a well-camouflaged position. His crew was trained to point of exhaustion, maneuvering the tank and revolving the turret as quickly as they could manage and always firing on the move. The Russian vehicles were destroyed by Captain

Nakazawa by firstly hitting the lead armoured car at point blank range from his concealed position. He then sprung out of this position firing on the move, knocking out the last armoured car. The middle armoured car was caught completely off guard as he swung his mount between a tree and the now burning last Russian armoured car. He rammed the middle ▶

**“The model is a first class effort let down by average tracks and by noticeably undersized rivets on various locations on the hull and turret.”**

at all, given the strides in molding technology in the intervening years. But this is not necessarily the case. The Tamiya kit is superior in regard to rivet detail and while it has a very simple hull, most of what can be seen is there. The two things that do give the Fine Molds kit the edge are the turret which is dimensionally spot on and the muffler details.

and introduced himself. He told me he also made models and had done so for many years in Japan. We then started to have lunch from time to time and the topic of Japanese tanks came up. He told me of a story he had heard back in Japan where Captain Shin Nakazawa who had died in the battle of the Philippines in 1945. He relayed to me that Captain



Close-up of the Commander figure in the turret. Note the tin foil grab handle on the rear hatch (these were made of leather on the real tank)



The Commander figure was made up from various parts. The head and hands are from the Hornet range while the legs and body are from FineMolds.



The arms were scratch built and the helmet was off a warriors figure. The katana (or Japanese sword) was taken from the Tamiya Japanese soldier set.



Close up of the painted hull with a gloss coat: Note the tow rope that was made by combining the ends from the kit example with the rope itself from the "Karaya" range of cable available from ([www.karaya.lawa.com](http://www.karaya.lawa.com))



Here is the painted model with a gloss coat and decals from the Tamiya kit.



I sprayed Tamiya XF-49 (Khaki) lightened with Tamiya XF-2 (White) mixed in a ratio of 70 percent thinner, 30 percent paint using a few passes to achieve a solid base coat. I decided to brush paint the brown and green colours directly in to the Khaki base coat. I came up with a mix for the brown that was roughly 1/10th Vallejo "031" red and 9/10th Vallejo "872" brown. I then added about two drops of Vallejo Diluent or thinner so the mix was relative thin.



I applied the brown with a number 2 brush making sure to firstly apply the colours thinly and to go over the application to avoid any brush marks. The first coat of paint will be fairly translucent but do not be alarmed; you will need to go over the brown areas of paint at least 3 times for the colours to become opaque. Allow each coat of paint at least a few hours drying time before the follow up coat.

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36081 Miatava Mk.IV 1/35 (Academy)



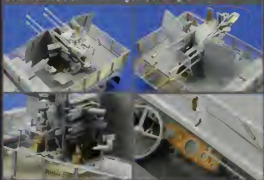
36081 Miatava Mk.IV 1/35 (Academy)



36089 Sd.Kfz.7/1 20mm Fickelberg 38 1/35 (Dragon)



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Here are photos of the model with the mist coat applied. I sprayed the model with a 50 percent Vallejo Matt Varnish "520" and 50 percent tap water mix to produce a dead flat finish. The model looked a little too harsh for my taste so I used the same mix of Tamiya XF-49 (Khaki) lightened with Tamiya XF-2 (White) I started with, but thinned down even further with a ratio of about 90 percent thinner to 10 percent paint. This mix was misted on in slow and deliberate coatings with most on the running gear and less toward the top.



◀ Russian car at full speed toppling it over. His actions did not go unnoticed, as he was then posted to training command in both China and Japan. As the war progressed, he insisted to be put back on active duty and he was assigned to the defence of the Philippines in the 2nd Tank Company but only in a training capacity. His last action was neither by design or intent. The commander of the tank in which he was to meet his fate was killed and through a willingness to fight (or by orders), he made his final charge in January 1945. Driving down a road in San Manuel with a group of infantry aboard he raised his katana and gestured for the infantry to dismount. His heavily camouflaged Type 97 was then hit directly in the turret, killing Captain Nakazawa instantly and sending the carcass of the hull careening into a drainage ditch at

the side of the road.

At the time I suspected when told the story all those years ago it was nothing more than legend, but it still motivated me to build the tank. Maybe it was the thought of a Japanese Tank ace or his less than glorious end. Who knows, but the story stuck.

#### THE BUILD

The main reason I bought the Fine Molds Type 97 was the turret. The only real vice of the older Tamiya kit is its dimensionally incorrect turret and to be honest, I was put off by the prospect of modifying it myself. The Fine Molds turret is not without its flaws however, as the rivet heads on the side of the turret are far too small. I assembled the turret as per the instructions and added some larger

domed rivet heads from the Grand Line range of after market rivet heads.

For this application I have used the .043" round rivet heads and when attached the turret was the dappled with Testors liquid cement with the aid of an old paintbrush brush in a stapling motion (to add a wee bit of texture). I also thinned out the commanders hatch covers as they seemed a little too thick to me, I also added the inner hatch detail with a combination of 5 thou plastic card and very fine rivets. The last item I added was the fine weld bead at the rear of the turret.

The hull was the next stage of the build process. The only real fault of the hull is the under scale rivet heads on the side plates and lower portion of the hull itself. I replaced these with some from conical rivets from "The Armory" range and like the Grand Line rivets used on the turret were very easy to apply. The next step was to thin down the front mud guards, I wanted these to be as thin as possible, so I set to work by thinning them down with the aid of a round file and sandpaper. When I could see light (when held up to a light globe) I knew they were thin enough. I then attached a 5 thou strip of plastic on the edges to give the front mud guards their distinctive profile.

The next step on this area of the model was to apply the Fine Molds update (Fnmmg-64) set for the mud guard supports. I then attached the road wheels. This can be a little tricky because if you're not careful the front and rear road



The key to brush painting with Vallejo is the clean your brushes often with a good quality brush cleaner, in this case "Sonjas" brush soap and conditioner.

wheels will not touch the ground, a little tweaking may be necessary here. I attached the inner road wheels to the middle four bogie assemblies and attached them to the hull. I then simple cut off the location tabs on the front and rear road wheels arms and glued I then let them dry (with the wheels attached) I left the middle outer road wheels off to allow easier painting. The last step on the hull was to replace all the little engine access handles with thin fuse wire. The tracks were the last item to be done on this model and I have used the Friulmodel Type 97 "Chi He" metal tracks (ATL-70). This is the first time I have used metal tracks on a model and to be honest, I found the assembling of these to be the most tedious thing I have ever done.....ever! The upside to this, however is when done, almost no painting was necessary.

#### PAINTING AND WEATHERING

This is the second time I have painted this model. This was the main reason I put this model aside for so long. On my first attempt I applied a very pale sand coat, slavishly following a scheme I had found in the Tank Power range



Note the staining of the muffler guards in this photo. The last step of the weathering process was the chipping process (or what has been described as "micro chipping") my main aim here was to be subtle and have all the chips in scale or and as one of my modelling friends has said you can't really see the chipping until you get up close.





Two paper products from Kamizukuri were used for the foliage. The colour was the most demanding issue I had when preparing this material. When I was in an art supply store in the middle of last year I came across some two vibrant greens I had ever seen. I purchased them with the view to using them at some stage. The colour is water based and thinned to such a degree it goes straight from the bottle into the airbrush via an eye dropper (included in the lid).



After the foliage was attached, I sprayed them and the model with a 50% Vallejo Matt Varnish "520" and 50 percent tap water mix to produce a dead flat finish.

of books. I had my doubts about how pale the sand base coat was but pressed on with gay abandon. I then painstakingly masked the entire tank in a camouflage pattern with the aid of frisket paper, masking tape and silly putty. When the masking was complete I then sprayed the two other camouflage colours. When removing the masking tape I had a sinking feeling as I knew right then and there, I had stuffed the paint job up well and truly. Not only were the colours totally wrong the camouflage pattern was incorrect, and to add insult to injury most of the little scratch build items I had added to the hull had come away with the masking tape. This is the time in modelling when we all say to ourselves "this is a bloody stupid hobby"! When I was younger, I would have put the model under my boot and thrown

about the model until I decided to empty the tub of Windex years later to discover the model had been totally stripped of paint. I had just finished my 1:48 scale AFV Club Sd.Kfz. 251 and needed to work on an easy model. This seemed to fit the bill. After attaching all the detail bits that had come off in the masking and cleaning process, I undercoated the entire model with a thin coat of Mr. Hobby Imperial Japanese Army "parched grass" (tcl15) from their enamel range of paints. My reasoning here was, if the Japanese can't get the shades right then who can! The paint itself is wonderful stuff and goes on very smoothly and produces a very tough finish. To my utter horror, I found myself thinking this parched grass shade they have given me here has way too much green in it and when it was dry my concerns

the lot out in the bin. Well, times change, and what I did with this one was place it in a plastic tub full of Windex and basically moved on. To be entirely truthful I forgot

were confirmed! The upside to this was that the paint had produced a very smooth finish and was almost faultless in its coverage.

To correct the base colour I sprayed Tamiya XF-49 (Khaki) lightened with Tamiya XF-2 (White) mixed in a ratio of 70 percent thinner, 30 percent paint using a few passes to achieve a solid base coat. This mix of paint was just the shade I was looking for and went on without any trouble at all. I then "rain streaked" the hull sides with straight XF-63 thinned in an 85 percent thinner and 15 percent paint to give the model a very subtle weathering and paint fade effect. I generally like to use this effect on solid colour subjects as it breaks the up the finish of a single colour subjects and makes them a little more interesting to look at.

I was not about to repeat what had happened with my first application of the camouflage. I decided to brush paint the brown and green colours directly over the Khaki base coat. To be perfectly frank, I was just too lazy to mask the tank up again. I came up with a mix for the brown that was roughly 10% Vallejo "031" red and 90% Vallejo "872" brown. I then added about two drops of Vallejo Diluant

or thinner so the mix was relative thin. I applied the brown with a number 2 brush making sure to firstly apply the colours thinly and to go over the application to avoid any brush marks.

The most important thing I can tell you here, is to clean your brush after each application of paint. If you don't, you will get little dry bits of paint coming out on your follow up coats. The first coat of paint will be fairly translucent but do not be alarmed; you will need to go over the brown areas of paint at least 3 times for the colours to become opaque. Allow each coat of paint at least a few hours drying time before the follow up coat. I must say, I had a lot of fun applying the paint by brush and it reminded me a lot of my modelling days when I was a boy. The green camouflage was Vallejo "823" and two drops of Vallejo Diluant. The application was the same process as that of the brown. As I was going to apply the decals from the old Tamiya kit (it included an option of the 2nd Tank Company that I wished to use) I coated the entire model with a coating of Future floor polish which resulted in a very fine glossy smooth finish. The decals were then applied. ▶



The model without the commander figure but with the foliage attached.



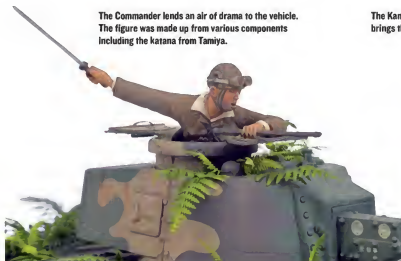
Tiny streaks of rust lend an air of authenticity. Subtlety is the key here.



Weathering of the tracks and running gear may be appreciated in this view.



The Fruii metal tracks are beautifully detailed, right down to the edges of the links and the lightning holes in the guide teeth.



The Commander lends an air of drama to the vehicle. The figure was made up from various components including the katana from Tamiya.

The Kamizukuri foliage really brings the vehicle to life.



◀ I then sprayed them and the model with a 50 percent Vallejo Matt Varnish "520" and 50 percent tap water mix to produce a dead flat finish. The model looked a little too harsh for my taste so I used the same mix of Tamiya XF-49 (Khaki) lightened with Tamiya XF-2 (White) I started with, but thinned down even further with a ratio of about 90 percent thinner to 10 percent paint. This mix was "misted" on in slow and deliberate coatings with most on the running gear and less toward the top. The tracks were "misted" coated with a mix of 90 percent thinner and 10 percent Tamiya flat black. The last step was to apply small amounts of mud from the Tamiya "Mud Weathering Stick" with the aid of a tooth pick to the centre of each track link and a little on the back. I then hand painted the rubber portion of the road wheels and attached the tracks. On all points of contact pave glue was applied to give a good solid bond. The entire lower hull was then given an oil wash

with firstly burnt amber and then lamplack. On both occasions I have used Zippo lighter fluid as a mixing agent as it dries more or less flat. The road wheels were then lightly dry brushed with a mix of Humbrol white and wood

as "micro chipping" my main aim here was to be subtle and have all the chips in scale or and as one of my modelling friends has said you can't really see the chipping until you get up close. (Just the comment I wanted to hear!)

## "Driving down a road in San Manuel with a group of infantry aboard he raised his Katana and gestured for the infantry to dismount."

brown with a greater leaning toward white. When this was done, a very thin "glaze" of straight Tamiya XF-59 Desert Yellow in a mix of 10 percent paint 90 percent thinner was applied to the lower hull in slow and deliberate stages. This glaze can be controlled and is most effective for taking the "hard" edge off the dry brushing the last step of the weathering process was the chipping process (or what has been described

The last step is to apply the foliage and in this case, I have used two paper products from Kamizukuri. I have used both the 1:48 scale palm fronds and the 1:35 scale jungle ferns in the application of the foliage on this model. The

prep work on these was simply spraying the items on the paper fret, cutting them off the fret, bending them with a wooden tooth pick and attaching

them to the tank. The colour was the most demanding issue I had when preparing this material. When I was in an art supply store in the middle of last year I came across some two bottles of Windsor and Newton Liquid Acrylic colour in the most vibrant greens I had ever seen. I purchased then with the view to using them at some stage. The colour is water based and thinned to such a degree it goes straight from the bottle into the airbrush via an eye dropper. (Included in the lid) After the foliage was attached, I sprayed them and the model with a 50 percent Vallejo Matt Varnish "520" and 50 percent tap water mix to produce a dead flat finish.

### SELF CRITICISM

I am relatively pleased with this model. The brush painting of the camouflage colours was, for me, a major win. I really did not think it was possible to get the kind of finish I achieved and I think a good deal of the credit should go down to the paint. The Vallejo range

Fine Molds has captured the shape of the Japanese Type 97 tank.



of paints is quite simply, superb. The foliage on this model turned out pretty well also and again I think this has a lot to do with my paint choices. The weathering on the model may well be a little too subtle. The figure is a bit of a disappointment also. I like the pose but the painting is again a little too subdued (on the uniform in particular). I guess I need more practice on figures and I plan a few figures in my next build, so I should get plenty of practice to improve my skills then.

## CONCLUSION

The kit has a few flaws, with the main ones being the tracks and the undersized rivet heads. None of the flaws are earth shattering or overly hard to fix. Is the model 20 years better than the old Tamiya kit? Well, no, to tell you the truth. The Tamiya kit does have one fatal flaw however and that is the undersize turret and no matter what anyone says, it is noticeable. So really the only game in town is the Fine Molds kit. But whether it is a quantum leap over the old Tamiya kit remains to be seen. ■

## Acknowledgements

I would like to offer my sincere thanks to Ray King who offered me the decals and the walk around photos for the preparation of this article. He is without a doubt one of the hobbies true gentlemen.

Thanks too to Stan Spooner who made the nameplate for the model.



## Modelspec

Fine Molds 1:35 Type 97 Shinhotto CHI-HA (improved turret) Kit No. 35137

### Paints Used

Tamiya:

XF-49 Khaki, XF-2 White, XF-1 Black, XF-52 Flat Earth, XF-59 Desert Yellow.

Humbrol:

Metal Coat "Z2004" Gun metal, Grey "Met 53", Matt White "34", Wood Brown "62".

Vallejo:

Silver "848", Brown "872", Red "031", Green "968", Military Green "975", Matt

Varnish "520", Diluted Thinner

Windsor and Newton Liquid Acrylic colour:

Sap Green, Olive Green

### Weathering Materials

Tamiya Weathering stick item "87081", Deco Art Light Earth Stucco "aslo4", Zippo Lighter Fluid, Windsor and Newton Burnt Umber, Windsor and Newton Lamp Black

### Tools Used

Waldron Sub-Miniature Punch and Die Set, Small Shop Brass Assist Roller set M4 Mc, Small Shop Hold and Fold, e-Toot, Jo Sonjas Brush/Soap and Conditioner

### After Market

Friulmodel Type 97 "Chi He" metal tracks AT-70

Fine Molds U25 Type 97 Series Photo-Etched FMMMG-64

Kamizakura 1/48 Palm Frons & U25th Jungle ferns

Grandt Line Rivets, D43 Round

The Army Conical Rivets AG13864

### References

Ground Power 1996 Japanese Combat Vehicles of WWII

Osprey Publishing Japanese Tanks 1939-45 ISBN 978-1-84603-091-8

Ground Power Aug 2009 ISBN 9781350100897

Osprey Publishing The Japanese Army 1942: 45 ISBN 1-84176-354-3

Imperial Japanese Army and Navy Uniforms and Equipment ISBN 4-87090-000-2

Concord Publications Tank Battles of the Pacific War 1941-1945 ISBN 962-361-607-4

Tank Power Vol 2, 4 and 5 by AJ press

- ☒ Generally good detail and good fit, accurate outline.
- ☒ Undersized rivets (especially on the turret); full-length vinyl tracks.

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Fine Molds is distributed in the UK by [www.modelwholesaleuk.com](http://www.modelwholesaleuk.com)

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# References - Type 97 Tank



## TYPE 97 TANK *CLOSE-UP*

Ray King presents a selection of photos of the Type 97 Japanese Medium Tank at the US Army Ordnance Museum.

**A**mongst its large collection, the US Army Ordnance Museum at Aberdeen Proving Ground holds a Japanese Type 97 Shinhoto Chi-Ha Medium Tank.

The vehicle is displayed outdoors, so it has been subjected to the ravages of the weather over the years. Even so, it is quite complete and displays many details that will be interesting to modellers of either the Fine Molds or the older Tamiya 1:35 scale Type 97 Chi-Ha kits.

These photos were taken by Ray King in 2007. It has since been repainted in an overall brown scheme. ■



▲ This profile view shows the characteristic shape of the improved turret.



▲ The drive sprocket and tracks. The deep holes for the track pins may be seen at the ends of the track links.



▲ The tall, narrow guide teeth on the track links each feature a triangular lightning hole.



▲ The Type 97 was fitted with a suspension system consisting of simple racking bogies sprung by horizontal external springs on the outer lower hull working through bell cranks.



▲ A detail view of the top of one of the rocking bogies, attached to a bell crank.



▲ The track guards are pressed from thin sheet metal.



▲ The conical bolts on the hull are large and distinctive.



▲ Two large hatches are installed on the forward hull in front of the ball-mounted machine gun.



▲ Stowage box on the rear hull plate.



▲ The cast metal front section of one of the exhaust mufflers. Note the prominent centreline seam. This is usually obscured by a curved cover forward of the muffler, but it is missing on this side.



▲ A nice detail shot of the perforated exhaust pipe.



▲ The exhaust heat shield is rusting away. The curved vertical exhaust cover is fitted on this side.



▲ The rear engine deck.



▲ The rear-facing turret-mounted machine gun and the rear turret hatch may be seen here.



▲ Note the large conical rivets on the turret.





Mini Art's Dingo Mk.III is one of three variants released over the last year.

# A DINGO IN THE WOODS

Jose Brito finds that MiniArt's 1:35 scale Dingo Mk.III needs little more than a small scene and a figure to bring it to life.

There is an old saying, "necessity is the mother of invention". There are many examples of designs that hold a special place in history. With the winds of war blowing in the late 1930s, Britain decided that it was time to produce a new light reconnaissance vehicle.

In 1938, the British companies Alvis, BSA and Morris presented their drawings. The BSA entry, designated Daimler Scout Car, was the winner and the design was so modern that the British decided to replace the vehicle by the "Ferret" only in 1952, seven years after the end of the Second World War.

Although the official name was Daimler Scout Car, the vehicle rapidly became known as "Dingo". Curiously, this was already the name of the vehicle designed by Alvis.

The Dingo was an impressive vehicle and well ahead of its time. It incorporated so many technical advances that further designs had to introduce changes to allow less experienced crews to operate the vehicle.

The Dingo was so good that more than 6,600 units were built. The Dingo remained in service in many countries until the 1970s, including my own homeland of Portugal.

In WWII, every time the Germans captured a Dingo it was quickly painted in German markings was immediately pressed into combat against its former owners.

The Ukrainian company MiniArt has recently released three variants of the Dingo in 1:35 scale. It can be transformed into an excellent replica thanks to its fine detail.







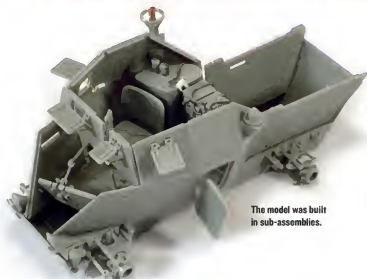
Some wiring was added to the kit radio.



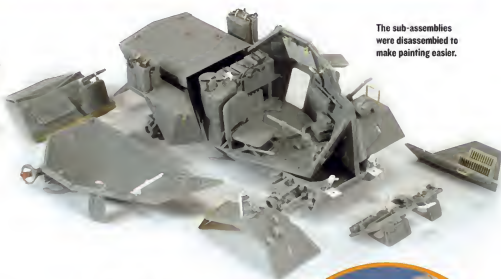
Additional tiny details were added to the crew compartment.



Kit detail is excellent.



The model was built in sub-assemblies.



The sub-assemblies were disassembled to make painting easier.

#### MINIART'S 1:35 SCALE DINGO

MiniArt's 1:35 scale Dingo is a lovely kit. It features restrained surface detail, good fit, accuracy, originality and most importantly is a kit of a very important subject that has been neglected by other modelling companies. Now MiniArt presents us with three different Dingo versions. The box art is lovely and inside the box we are presented with state-of-the-art contents. MiniArt also provides a small photo-etched fret and decals

for several different versions.

Once built, the Dingo is very compact but the MiniArt kit is full of many details. Being an open topped vehicle, they made an extra effort with the interior. Most of it is visible and MiniArt offers awesome details.

This was my first MiniArt kit and I must say that it will not be the last. I am very impressed by the quality, fit and the overall good engineering. The instructions are very clear and the construction quite straightforward.

#### CONSTRUCTION

Construction is undertaken in subassemblies in order to speed up the building, and also to ease painting further down the track. I started with the interior. Detail is comprehensive and even built directly from the box it looks fine. I only added the wiring in the radio and some minor details. I must advise the readers that the small details I added would have been impossible for MiniArt to replicate them in plastic. Most



Coiled rope was added to the front of the vehicle.

We are ready for paint. The base coat was Tamiya XF-10 Flat Brown.



Weathering and shading has a dramatic impact on the dark camouflage colour.



The main camouflage colour was Tamiya's XF-11 J.N. Green.



Magic Sculpt was used to scratch-build rucksacks and packs.

of the extra work I did was add the wiring in the radio and some tiny parts in the back of the crew compartment.

This open top vehicle demand a different approach. During construction, the subassemblies were constantly dry fitted to assure that everything okay and properly aligned. In the end, I wound up with several subassemblies packed with great details. The photo-etched fret provided in the kit is very well engineered and greatly improves the final look of the model. The rest is achieved by the good quality of the MiniArt plastic parts.

I decided to place some rucksacks, canvas and other accessories made by Magic Sculpt to add a used and battered look. Magic Sculpt is ideal to reproduce these kind of accessories. I just mix two small portions of the different parts; roll them over a flat and very clean surface (a tile or a sheet of glass for example) and then cut a small and very thin sheet. I place the sheet in the desired spot and then start moulding it into its final position. Once set after around 24 hours, the Magic Sculpt is rock hard and can be sanded, painted and weathered.

## PAINTING

With all the subassemblies were finished, it was time to start painting. The parts were airbrushed with heavily thinned layers of Tamiya XF-10 Flat Brown. I normally use this colour as a primer and also as for pre-shading that will subtly show through the top camouflage layers.

These layers were applied heavily diluted in order to keep all the surface detail. As usual I used my Aztek 470 airbrush with the orange tip for big area coverage.

Once the Tamiya XF-10 Flat Brown had thoroughly dried for about 24 hours, I started applying the final colour, in this case Tamiya XF-11 J.N. Green. Once again, this camouflage colour was applied in several well thinned coats, this time with the grey tip (for medium areas coverage) fitted to my Aztek 470 airbrush.

Now I started painting small details with Vallejo Acrylics. Vallejo produces very fine acrylics paint and as usual is my first choice when it comes to brush painting small details. The paint flows very smoothly and the finish is always impressive.

At this point I also added some leaves from Model Scene. I used some of their super fine oak leaves in different colours. They are laser cut paper leaves and the texture and colour are just amazing. They



The basic elements of the scene were a wooden base and balsa wood sides. The balsa was glued to the base to create a small box.



Basin foam was cut to size. The foam fills the majority of the box.



The resin Dragon Teeth came from the Portuguese company RMG. A paper clip was used for the handles.



Holes were drilled into the top of the tank obstacle.



The paper clip was snapped to size, bent to shape and glued into the holes.



The broad texture was brushed on using Tabocola. This is a pre-mixed builder's filler.



Note the depressions in the groundwork designed for the Dingo's wheels.

greatly enhance the finish and add an extra touch of realism.

## WEATHERING AND FINISHING

The first step for weathering was to apply hundreds of small scratches to the model. They must be applied in the most logical places and it is a very time consuming process. I used a brand new, very fine brush for the job. The paints came from the Vallejo range. Several green shades were employed to add more realism and scale to the scratches. The older ones were painted in a dark green and the more recent ones in a brighter green. This step is very important for the final look.

With the scratches dry, it is

time to apply the decals. Normally I use the Microscale decal solution for this job, but this time I decided to use, for the first time, the decal solution from Vallejo. It was a huge surprise. Their decal solutions are great and in my opinion less aggressive than the Microscale's solvent.

The approach is the same. A small quantity of Decal Fix (72213) is applied by brush, and then I add the decal over it. I removed the excess fluid with a cotton bud and then I apply, once again with a brush, a small quantity of Decal Medium (73212). This Decal Medium is a decal softener. Once applied over the decal we must not try to move the decal. It must be

allowed to dry untouched. Once dry, the decal conforms perfectly to the surface detail. I must recommend these decals solutions from Vallejo to everyone. They are great and they work very well.

## VALLEJO MATT VARNISH (059) TO SEAL AND PROTECT THE DECAL.

The next step was to apply an overall coat of Vallejo Wash, a range of new products from this company, that I used for the first time. I used the Vallejo Wash Sepia Shade (73200) and the Vallejo Wash Black Shade (73201). They can be diluted with water and they are lovely. I apply them in very diluted layers and taking a lot of attention to the recessed lines



A mix of Robbialac Aquaplast, acrylic paint, fine sand and water was used for the groundwork.



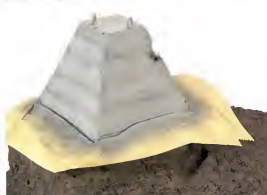
Acrylic paint tints the mix. Grit for domestic birdcages is an easy way to add texture to the mix.



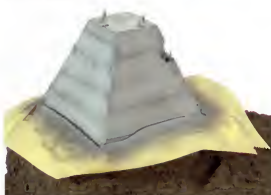
The brown groundwork mix is liberally applied to the base.



The Dragon's Tooth is masked off and sprayed.

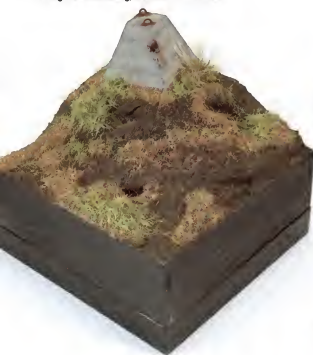


The dark colour shows underneath the top coat as pre-shading.



The resin accessory is a nice focal point for our scene.

Three shades of grass were chosen. First, old-fashioned white glue was applied to the groundwork. The grass was then painstakingly glued into place. Although time consuming, the result is worthwhile.



The barbed wire was also sourced from Portuguese company RMG.



The entire scene was dry brushed with a paler shade of oil paint.



Weathering was added using dry pastels, as well as pigments mixed with water and Vallejo Glaze.

and details. They dry very fast and in some parts they were applied in vertical lines to represent the exposure to the elements.

Vallejo pigments were also used for the first time. The range of colours is big, well planned and made with modellers in mind. The earth and oxide colours are great and certainly improve the look of the finished model.

Vallejo also makes a Glaze Medium (70596). This is a 100% acrylic resin than can be mixed with the pigments. They can be mixed with water and White Spirit from Winsor & Newton too.

They were applied dry, and also wet mixed with water and Vallejo Glaze Medium (70596). I also applied some more small scratches with Derwent and Faber-Castell brown, grey and black soft pencils.

#### BASE

I love scenes and vignettes. Most of the time I display my models on small bases or dioramas. This project was no exception.

I started with a wooden base, side walls in balsa wood, interior filled with oasis foam or heat isolation foam and pre-mixed filler to make the terrain texture.

For the terrain I used a mix of Robbialac Aquaplast, acrylic paint, fine sand and water. Robbialac Aquaplast is a filler used in civil construction and is water based. It can be mixed with water and is very easy to work. The mix of all those materials looks like chocolate mousse and can be applied with the help of a medium flat brush. Once dry it looks very realistic. It also dries rock hard.

Once well dry, a dry brush with oils was applied with a large flat brush. For that I used mainly brown and sand tones. When the oils were thoroughly dry it was time to

apply some dry pastels and Vallejo pigments. In this case I used several earth colours. They were applied dry, and also wet mixed with water and Vallejo Glaze Medium (70596). After that, I applied some very diluted passes of Tamiya XF-57 Buff to represent dust.

The resin "Dragon Teeth", barbed wire and barbed wire entanglements came from the Portuguese company RMG. These are great and ideally suited to the scene I was working on. I only added some handles to the "Dragon Teeth" bent from a metal paper clip. This was airbrushed





Vallejo pigments were used to add more weathering to the body of the Dingo.



with Tamiya XF-24 Dark Grey and once well dry, was again airbrushed with Tamiya XF-19 Sky Grey then weathered with pigments and washes from Vallejo. I gave the same treatment to the barbed wire and entanglements.

I normally use several brands of synthetic grass for vegetation. The grass is secured with the help of regular wood glue. This is a very time consuming process. The grass must look natural as if it has been planted in small portions. Even for a small base like this one I needed almost three hours to finish the job.

Once the grass was set, the excess was removed and I airbrushed a coat of Tamiya XF-67 NATO Green, followed by a coat for the grass using Tamiya XF-67

NATO Green mixed with Tamiya XF-15 Flat Flesh. For a varied look I also used turf from the Model Scene range.

Next I added a wash of Winsor & Newton 35 Raw Umber diluted with Winsor & Newton Sansodor (Low Odor Solvent).

The next step was to dry brush all surfaces with a mix of Winsor & Newton 29 Naples Yellow Hue, Winsor & Newton 40 Titanium White and Winsor & Newton 35. The wash and dry brush were applied with a medium flat brush.

In the place where the model would stand, I opened four large holes, one for each wheel. I made a small hole in the bottom of each wheel and glued a metal pin. This pin would be inserted in the holes

previously made in the base. This provides a durable join between the model and the base and a very realistic combination of model / ground.

All the sidewalls and the wooden base were painted in black from Robbiacal range.

## FIGURES

I always use figures in my works. They offer a sense of scale, tell a story and add more interest to the scene.

The figure came from a Dragon box, Panzergranadiers, Arnheim 1944, Ref. 6161. It received a new head from Warriors or Hornet (I just don't remember exactly which as the head came from my spares box). The Dragon figure has good detail and is very suitable for my project. I wanted to represent a stressed look. My idea was to depict a soldier looking into the landscape. He sees something strange. It is a basic instinct to kneel when we are apprehensive. I put together a test composition with two figures but in the end I decided to use only one. The other one just did not fit the final look I wanted.

The figure was primed with Tamiya XF-15 Flat Flesh applied by airbrush in several well diluted layers to preserve the surface detail. As usual I paint all the parts with Acrylics from Vallejo, except

the flesh parts that are always painted in oils.

The figure received some dirt and mud in the boots and pants. As usual I applied a mix of dry pastels and pigments mixed with Vallejo Glaze Medium (70596) using a fine brush and in successive layers with the objective of changing the colours.

I really like to paint 1:35 figures and Dragon's offerings are a great value of money. In my opinion the one aspect that Dragon must improve is the facial expressions. Otherwise the figures are great and very accurate. In fact, they are a delight to build and paint.

## CONCLUSION

MiniArt has produced a very original and well-detailed Dingo kit. With some care it can be turned into a great model.

The Dingo is an eye-catching model. As a modelling subject, it is different, attractive and unusual. In the end was a great experience and pleasure to build this kit.

This was also a great opportunity for me to try new techniques and approaches. It was also my first experience with Vallejo pigments and washes. They worked out very well.

I wish to express my gratitude to everyone who helped me out with this project. ■

The completed scene. The figure is hunkered nervously in front of the abandoned Dingo.





The kit decals were used in combination with Vallejo Decal Fix and Decal Medium.



The bottom of the wheels were drilled and fitted with pins to secure the vehicle to its base.



Initially, two figures were going to be used but only one was used in the end.



The heads were painted separately.



## Modelspec

Minikrit 1.35 Dingo MK.III

Kit No. 35077

### Items used

- 1/35 Minikrit Dingo MK.III, No. 35077
- 1/35 Panzergranadiers, Arihnen 1944, Ref. 6161
- 1/35 RMG Resin Models "Dragon Teeth"
- 1/35 RMG Resin Models Barbed Wire, RM013
- 1/35 RMG Resin Models Barbed Wire Entanglements, RM040

### Materials and paints used

Hood glue, Plastic glue, Contact glue, Heat isolation foam, Wood base, injected plastic, Resin parts, Plastic card, Metal parts, Vallejo acrylics, Vallejo washes, Vallejo pigments, Tamiya acrylics, Dry Pastels, Oil colours:  
Winsor & Newton Oil Colour 35 Raw Umber, Winsor & Newton Oil Colour 2 Burnt Sienna, Winsor & Newton 25 Lamp Black, Winsor & Newton 29 Yellow Red, Winsor & Newton 40 Titanium White, Perwent and Faber Castell soft pencils, Aquaplast - Robbulaac Fine sand Plus Model Lead wire 0.2mm, Lead wire 0.4mm

### References used

Several internet sites and forums

- ☒ The Minikrit kit is very original and unusual. Good surface and overall detail.
- ☒ Nothing worth mentioning.

### Available from

Minikrit Models are available in the UK from Creative Models [www.creativemodels.co.uk](http://www.creativemodels.co.uk)

## Rating ●●●●●●●●

# AIM HIGHER



Illustration by Mario Gomez



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Generic decals are provided.

Stuart Ransley examines the new 1:35 scale HobbyBoss ZTZ-99 A.

# HYBRID MBT

**T**he ZTZ-99 is a direct result of Chinese Army's (PLA) third-generation MBT programme, which began back in the late 1970s. The first prototype, known as Type 90, featured a Russian designed 125mm gun and autoloader. This vehicle was built and tested in 1990. However, the First Gulf War made the PLA rethink the design as the tank was still not a match to Western MBT designs such as the M1A1 and Challenger 2. A new MBT known as Type 98 featuring a T-72-like hull was first revealed in October 1999 during the national day parade held in Beijing. Further improvements were made to the Type 98 including thicker armour and a better, more powerful engine. This variant was known as Type 98G. After the design was accepted by the PLA it became the ZTZ-99 or Type 99 in 2000 with the tank entering service with the PLA in late 2001.

The ZTZ-99 has a mixture of Russian and Western influence in its design and technology. The hull of the tank is very similar in design to the Russian T-72, though the angular turret is clearly of a western style. The 125mm smoothbore main gun/

launcher and autoloader, which allows the crew to be reduced to three, are both believed to be of Russian origin. The ZTZ-99 carries the Russian 9M119 Refleks (NATO codename: AT-11 Sniper) anti-tank guided missile, which is launched from the main gun. The tank's liquid-cooled, turbo-charged diesel engine is said to be based on the German technology.

I have always had an interest in Soviet/Russian, Communist Bloc designed armoured vehicles. So with the release by HobbyBoss of their kit of the ZTZ-99A I jumped at the chance to take a look at it.

On opening the box we find 21 sprues containing a total of 400 parts, all molded in the usual light grey plastic, one photo etched fret, one decal sheet, one colour painting guide and assembly instruction booklet.

The parts on the review kit are crisply molded and flash free. There are mold lines present on some parts but these are very fine and should be easy to remove. Many of the parts have ejector pin marks on them but they appear to be in areas that will not be visible after the kit is completed. The lower hull is of the conventional tub type with crisp detail and no flash but there were two sink

marks in the bottom that would have to be filled as they are very obvious. Moving to the tracks, these are well-detailed individual links that will require very little clean up and are not designed to be workable but glued together.

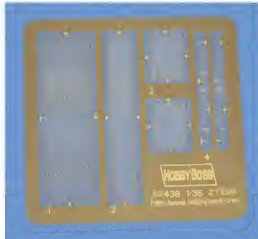
The Reactive Armour panels on the hull front and turret have been accurately reproduced right down to the mounting bolts.

The assembly instruction manual is well laid out and easy to follow. A small decal sheet is provided that has 2 national markings (red stars) and a series of white numbers from 0 to 9 for the 3 digit turret numbers.

The only problem I could find is with the painting guide. While it has excellent colour graphics and has six paint manufacturers colours listed for the vehicle it shows, what appears to be a hard-edged camouflage pattern. After looking at several close up photos of the actual vehicle the pattern should be a soft edge.

In conclusion, this kit offers good value. I think it is one of HobbyBoss's best efforts yet. ■

Thanks to Creative Models Limited for the sample  
[www.creativemodels.co.uk](http://www.creativemodels.co.uk)



The grilles feature photo-etched parts as the uppermost layer.



Photos of the real tank show a slightly soft-edged camouflage demarcation.



Hatches on the engine deck are moulded shut but the grilles are open.



The one-piece lower hull is well detailed.



The track guards feature raised detail moulded on for the latches.



The angular turret is clearly inspired by western designs.



Reactive armour panels are supplied as separate parts.



Wheels are crisply detailed with hub covers moulded in place.



Tracks are separate links. These feature detail moulded to the edges and hollow track guides.



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# EIGHT WHEELS ACROSS IRAQ

Sam Dwyer updates Trumpeter's new 1:35 scale ASLAV-25 to Phase III standards.

Recon: The ASLAV-25 paints a menacing picture, even more so with BAR armor fitted. Crew ride low in the turret to present a lesser target to snipers, and to minimise their exposure to roadside IED's



Here you can see how much needs to be changed on the Trumpeter kit to get an accurate Phase III ASLAV.



**T**he Australian Defence Force conducted a year-long evaluation on 15 light armoured vehicles purchased from the United States Marine Corps in 1990 to see how wheeled vehicles would handle Australian conditions and what modifications would need to be made.

In 1992, under Phase 2 of ASLAV Program, the ADF acquired 113 Canadian manufactured LAV modified specifically for the Australian Army. By 1997 the 2nd Cavalry Regiment was fully equipped with the ASLAV.

Phase 3 of the ASLAV acquisition was approved with the follow-on purchase of 144 vehicles. These Phase III ASLAVs featured increased levels of local content including the fabrication and assembly of LAV-25 turrets by General Dynamics Land Systems - Australia.

#### TRUMPETER'S ASLAV-25

This release from Trumpeter purports to be a Phase III ASLAV-25. Moulded in Trumpeter's customary light grey, flash free styrene, comprising roughly 330 parts. The kit comprises ten sprues plus upper and lower hull, nine rubber tyres, three decent sized etch sheets and a comprehensive decal sheet with options for two vehicles. As with all Trumpeter kits the Instructions are clear and easy to read. Trumpeter should be applauded for seeking instruction from their local Australian distributor as well as assistance from online modelling forums to get this kit fairly accurate. Mostly, they have done a great job, but that is not to say there isn't room for improvement!

The Trumpeter kit is really a hybrid of Phase II and III vehicles.

Once the Phase III program started (2003-2004) and the initial vehicles were sent to units after the upgrade, not all of the Phase IIIs had all of the external mods. The slight assembly for the commander and the larger camouflage pole stowage rack are two examples of items that were not upgraded in the first Phase IIIs delivered. Some vehicles also did not have spare tyre racks and drivers windscreen box. If you want to build an operational vehicle, you will need to work closely from images of the real thing. There are many combinations of parts that can be used. For example the first, second and third rotations of the Security Detachment (SECDET) in Iraq were completed as Phase II ASLAV's. Subsequent rotations were Phase II upgraded in theatre to Phase III.

I used Mouse House's Military Briefs #4 to search for a vehicle to model, and ended up finding one on the internet - Beowulf, 22A from 2 Cav - the Australian 2nd Cavalry Regiment, in Iraq sometime 2005 - 2006. The more I looked, the more photos of this interesting vehicle I found. This vehicle featured turret bar armour, no hull bar armour, no prop or headlight brush guards, and some unique stowage. Modelling this vehicle was an easy choice.

#### MODELLING A PHASE III ASLAV-25

Mouse House from Australia has recently released a comprehensive 1:35 scale Phase III ASLAV-25 upgrade for Trumpeter's LAV-25 kits. This is an impressive multimedia offering with resin and photo-etched parts.

I followed the Mouse House instructions very carefully, starting by removing areas that needed to have replacement parts added from the Mouse House set, or ►





◀ areas that needed to have non skid texture applied. I used small squares and rectangles of Tamiya masking tape, as well as Gunze masking latex to mask areas not to get non skid, then used textured paint in a rattle can, sprayed over the horizontal surfaces of the hull and turret to get the texture right. I did the hull areas first, and by the time I was ready to do the turret, the nozzle of the spray can had solidified! I used Gunze Mr Surfacer sprayed through an old airbrush to replicate non skid on the turret. The major surgery

required on the hull is the removal of the kits engine deck. To date no manufacturer has got this complex assembly right, although Trumpeters' is the closest so far. Mouse House include a 1 piece resin engine deck, with no resin plug to remove, that with careful trimming of the Trumpeter kit, is a straight drop in fit. It took maybe 30 minutes of careful chopping, gouging and sanding to get this area spot on. Thankfully the resin part was cast perfectly so fit without any dramas. Once the engine deck was mounted, I

glued the major hull components together, then sanded off all the welds. Trumpeter went to a lot of trouble to get all the hull welds on there, but in reality these welds are ground down at the factory, ASLAV family of vehicles have smooth surfaces and joins.

From there, it's just a matter of consulting the images of the real thing, consulting the instructions from the Mouse House kit, and working out with the CA glue! Pretty much everything on

the Trumpeter kit gets replaced, I went a little further and replaced the kit grab handles with some fine brass wire. I carefully trimmed the Trumpeter engine deck mesh to fit the Mouse House engine deck. This mesh was then secured with tiny punched styrene bolts. I used the Trumpeter etch for the guard over the driver's episcopes.



Tail end Charlie. Note the left tail light cluster is positioned eddly. This was done on the real thing to make room for the spare wheel carrier. The prop guards were left off, as was done on the real thing. Probably not much opportunity to wade or swim these vehicles in downtown Baghdad!

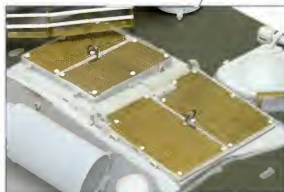
The large bin on the side was initially only fitted when the vehicle carried BAR armor, but was found to be so useful, tends to be fitted all the time now.

Here you can see the non-skid texture added to the hull in dark green/grey. This was added before all the kit parts were fitted. It would have been a nightmare to apply otherwise.

Here you can see all the alterations and modifications necessary to bring the Trumpeter kit up to speed. Turning the front wheels adds a bit of life. Only the four front wheels steer on the LAV family of vehicles.



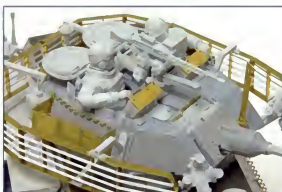
Not much of the Trumpeter turret remains visible after adding all the Mouse House updates. Particularly impressive is the Bar Armor suite, which is easy to build and fits perfectly.



Trumpeter did a good job with the complex engine deck area, but it is best replaced with the Mouse House part. This was enhanced with the Trumpeter kit mesh and some styrene punched bolts.



Headlight cluster. There is a lot going on here. On top of the lights are flasher units. These are basically police lights, used to get traffic out of the way on road runs through Baghdad.



The ASLAV crew ride very low in the turret hatches to avoid unnecessary exposure to IED's and snipers. Arms Corps Models ASLAV crew really capture the look of modern Aussie soldiers well, even without paint.



Here the stowage is being added. I used camping beds from Real Models. These feature great detail and already have retaining straps on them. The jersey can is from Tasca and is sneakily a German WWII item. Australian pattern metal POL Jerry cans are virtually identical to WWII items.



This camouflage brown color was my first attempt at the tan brown on ASLAV's. Clearly it is terrible, and nowhere near the real thing. Still, it serves as a good base coat for the correct camouflage color!



I added the camo net and camo pole stowage to the turret bar armor. This was added by sculpting and texturing a ball of Aves Apoxie Sculpt. Tamiya tape securing straps hold it all together.

Trumpeter has done an admirable job of getting the head light and tail light clusters right. These areas of the ASLAV are chock full of detail. I replaced the front headlight and horn clusters, as well as the drivers' heads up display with resin Mouse House items, available in their ASLAV MEAO 'communications' set. You will notice in the images there is a small 'thingy' that looks like a shark fin, on the front and rear corners of the vehicle - we can't really say what they are for OPSEC reasons, lets just say they're there so the crew can pick up satellite TV! Flasher units are mounted above the headlights. It was found that drivers in Baghdad wouldn't get out of the way of a speeding convoy of ASLAVs, even when warning shots were fired. Red and blue police flashing lights were added, as well as a police siren, and this was found to be a highly effective method of moving stationary traffic out of the way. Mercifully, most ASLAVs in Iraq have the headlight and prop guards removed, which saved me having to clean up the parts and put them on the kit. I would have used the kit parts if the ASLAV I was doing had the guards

mounted, as the Trumpeter parts are commendably delicate.

The Mouse House instructions for their communications set provides a complete wiring diagram for the headlights and associated extras, I used fine fly fishing lead wire rather than the solder provided in the Mouse House kit. Late in this build Jason Miller of Arms Corps Models supplied me with a set of his new bulged XML tyres for the ASLAV. At the time of writing, these tyres are about to be released onto the market. Mine was a pre-production sample that were cast blemish free and were a straight fit onto the Trumpeter kit. They are the grey resin wheels in the accompanying photographs.

The turret of the ASLAV was the area I was most looking forward to building. Bar Armour was mission applicable, meaning it was added or removed by the crew depending on the mission at hand. All the shots of Beowulf I had showed it with Bar Armour. The Mouse House set comprises of etched edging with styrene rods. Having built an AFV Club Stryker with a full slat armor suite, I was expecting a similar nightmare ▶

The camouflage pattern was applied freehand with an Iwata Custom Micron airbrush, using photos of the real thing to get the pattern right. These were painted upon delivery and the camo patterns were very uniform from vehicle to vehicle. The decals were a mix of Mouse House and Echelon waterslide decals.



The actual camouflage colours were tricky to match up, especially the tan color, which in some lights goes from a light sandy colour to almost pink. I figured I'd go for the middle ground and use a light tan color. Beowulf was heavily weathered anyway, so an exact color match wasn't uber critical.

I was able to match the hull rear markings off an earlier shot of 22A Beowulf, when it was 12A Apollo. The ARN and caution markings are standard on all ASLAV's. The little Aussie flag is unique to this vehicle.



With the tyres painted in using a dark grey, the model is really coming together. Here I need to add the lozenge camo decal to the side hull bin. Mouse House provide this decal in their set. The Bar Armour on the turret remains in the tan color, with no green or black over the top.



The red roo decal on the side is really striking and makes the vehicle look uniquely Australian.



Lozenge decal. I used Tamiya's new decal solution to get it to snuggle down, and it worked perfectly. Note that the colors on the decal are pre faded. The pattern is printed on canvas, so faded out quickly in the Iraqi (and Australian) sun.



Here I have painted up the camo net, the figures and The General - the GPMG on the Platt mount. The optics were base coated in Humbrol silver, then a thin coat of red and purple nail polish was added to get the anti laser coating look.



I added paint chips to the jerry can using Vallejo paint and a fine brush, and the dust was added using oil paints.



Getting the colors right on Australian uniforms is a nightmare! Luckily in the Arms Corps Models set they thoughtfully provide Vallejo paint matches, so painting these guys wasn't the chore I was expecting. I used Vallejo acrylics throughout on these figures.



I painted an Australian Flag as the gunner's bandanna (which ended up looking like a Union Jack). This was pointed out to me as highly inaccurate as the balacava's the crew wore were in fact nomex anti-flame burn balacavas. Anything not nomex was never worn on operations. I left it on the figure anyway, as it adds a little colour.



The taillights were painted first with a coat of Humbrol number 11 Silver Fox, then Clear Red and Clear Orange for the indicators and stop lights. I added diesel fuel stain on the back too. The paint on ASLAV's was pretty hardy, so I kept the chips to a minimum.

**“Getting the colour right on Aussie armour can be likened to turning lead into gold, or water into wine – it’s a nightmare!,,**



◀ but nothing could be further from the truth. The turret armor went together in under two hours. Resin arms hold the armor the required stand off distance from the turret. These need to be carefully sited so that the bar armour sits perfectly horizontal. I the kit instructions call out the best order in which to mount the parts. The kit turret bins aren't fitted when bar armor is fitted, rather smaller bins are put in their place. Mouse House supply these bins in photo etched brass, that fit perfectly. I had the turret assembly built with in a single Sunday, I think this is a credit to the pattern maker who clearly knows his stuff. Topping off the turret, I added the Mouse House ASLAV crew. These guys sit way down in the turret, as the real crew do to minimise their exposure to the bad guys!

#### AUSTRALIAN COLOURS

I usually like to use Tamiya grey primer to give the model a uniform surface for paint. This was especially necessary with this model due to the amount of disparate materials used in the build. I then applied a coat of Tamiya XF 52 Flat Earth, figuring this would be a good colour for the tan used on ASLAVs. Boy, was I wrong. This colour was too

brown, and too dark by a country mile. I ended up using Vallejo Iraqi sand as the tan colour. Getting the colour right on Aussie armour can be likened to turning lead into gold, or water into wine - it's a nightmare! For the green, I used Gunze H303 'green' and for the black I used Tamiyas XF1 flat black. Once dry the whole shebang was given a coat of Future to gloss it up for the decals.

I applied a mixture of Mouse House and Echelon decals to get the right markings for Beowulf. The kangaroo marking and the 'BEOWULF' came from the Echelon ASLAV set, everything else, including the lozenge camo pattern bin cover came from Mouse House. I used Tamiya's new decal solution to get everything to sit down nice and flat and bubble free. It worked perfectly over all the decals.

#### STOWAGE

Beowulf carried some interesting stowage in the photographs I found. Hung on the right side rear was 4 or 5 folding camping cots, there is what looks like a pile of camouflage netting on the turret rear draped around a cam net pole assembly from ajj MI Abrams, and there is a small teddy bear mounted on the front hull plate! I found a resin 1:35 scale teddy



Photos of the real Beowulf show remnants of previous call signs on the engine grills. I used Humbrol flat white for this, then faded and distressed the call sign with a brush moistened with thinners.

bear in a set of Plus Models toys (Thanks Jim!) and the camp cots came from Real Models. I used Tamiya tape to strap down the cots, as well as the Tasca jerry POL cans. I used WWII pattern German jerry cans, as Australian pattern steel POL (petrol, oil, lubricant) cans are exact copies. I started the turret stowage by gluing 5 lengths of Evergreen 40 thou rod together, with a length of brass tube glued across the end. I sculpted a partly open camo net bag using Aves' Apoxie Sculpt. I also used this two part putty to sculpt the camo net itself. I used a section of brass tube and simulated the leafy texture of the camo net by pressing this

tool repeatedly into the soft putty. Tamiya tape was again used to secure it to the turret bar armour. A 7.62 mm ammo liner was added to the mantlet. This was done by the crew to mount a video camera to get gun camera footage.

#### WEATHERING

The whole model was weathered almost exclusively with oil paints. I use Windsor and Newton oils exclusively, they're expensive but will last a life time and are worth it. Oils lend themselves to some subtle weathering effects, I started off by applying random 'daubs' of paint, then blending and working the paint with a soft brush slightly ▶



Done! The Trumpeter kit really benefits from all the Mouse House additions, and combined they capture the look of the ASLAV Phase III. As a final touch I weathered the tyres with a wash of Vallejo Buff, then once dry a light dry brush with Humbrol flat black.

# “Having built an AFV Club Stryker with a full slat armor suite, I was expecting a similar nightmare but nothing could be further from the truth.”

moistened with thinner. This technique isn't new by any means, but this was the first time I'd done it on a dusty, sandy vehicle. Each camouflage color was faded out slightly with light sand, light green and grey tones respectively, taking time to add light and shade to each panel, which adds visual interest. These vehicles tended not to be massively weathered, having said that, the shots I have of Beowulf show it to be fairly dusty, but not chipped heavily. Successive layers of light sand and dirt coloured oil paints were added to the lower areas of the model, with 24 hours or so between applications, lest the colours become a monotone amorphous nightmare. I finished the weathering by applying a raw umber wash, this adds a tiny amount definition around details, and removes some of the bleached out look I was trying to avoid. The beauty of using oils on this model over pastel chalks, I can safely handle this model without fear of leaving finger prints! One photo of Beowulf shows the remnants of a previous call sign on the engine grills, in this case 12A. On a previous deployment this vehicle, ARN 16377 was in fact call sign 12A 'Apollo'. These vehicles stayed in Iraq while various units came and went, each unit would repaint the call signs accordingly. This oil call

sign was painted on with Humbrol flat white, then distressed with a thinner moistened brush.

## CREW FIGURES

The crew was painted up using the Mouse House painting guide included in the figure set. This proved to be somewhat of a live saver, as I have never been able to adequately match the colours used on Australian uniforms. These instructions call out Vallejo acrylic colour matches. I used Vallejo paints exclusively to paint and weather the figures. I wanted to add a touch of colour to the figures, so painted the gunner's bandanna with an Australian flag. In reality, the wearing of non-regulation equipment was never done. The crew wore Nomex anti flash balacavas under their CVC helmets to protect them from flash burns.

I did most of the detail painting on this model with Vallejo acrylics. The camo net, stowage, tools tyres and GPMG were painted with Vallejos. The lights and optics were base coated with Humbrol Nr 11 silver fox, then Gunze clear colors, red and orange were used to paint in the tail light lenses. I found some cheap nail polish at a nearby chemist that was a perfect match for the anti laser coating on the episcopes and turret sight heads, this was painted carefully on with

With everything painted up and weathered, the ASLAV looks menacing. The patch of light sand colored paint on the hull front is actually undercoat exposed when the trim vane was removed. ASLAV's are delivered in Sand colored undercoat then the camo colours are applied over the top.



a fine brush (NOT the brush that comes with the nail polish!)

## CONCLUSION

Straight from the box, Trumpeter's this kit builds into a decent representation of an ASLAV. It is certainly 1000% better than the comparatively crude Italeri or Lindberg LAV-25. As with all models though, there are always things you can improve on. Mouse House has done a brilliant job in catering to those who want to improve upon the Trumpeter kit and get a truly accurate Phase III ASLAV-25. ■

## Acknowledgements

Special thanks to Jason Miller of Arms Corps Models for his continued assistance on this project.

Thanks to JB Wholesalers for the Trumpeter kit sample [www.jbwholesalers.com.au](http://www.jbwholesalers.com.au)

I made up a simple base using fine wet and dry sand paper to simulate a road, and a Jersey Barrier that I picked up cheaply on eBay. I used ground up pastels to simulate sand and dirt on the road way.

## Modelspec

Trumpeter 1:35 ASLAV-25 Reconnaissance Vehicle Phase III Kit No. 00393

### Kits used

Mouse House MA125 ASLAV-25 Phase III with Turret Bar Armour.  
Mouse House MAD413 ASLAV Generic Tac Markings.  
Mouse House MAD415 Australian Flags.  
Mouse House MA322 ASLAV MEAD Communications Update 2005+.  
Mouse House MA1801 ASLAV Turret Crew MEAD.

### Paints used

Tamiya XF 1 flat black, Gunze H20 flat clear, Gunze H303 Green, Gunze H90 clear red, Gunze H92 clear orange, Humbrol 34 flat white, Humbrol 33 flat black, Humbrol 11 silver fox, Vallejo 70019 Iraqi sand, Vallejo 70095 black, Vallejo 70022 German camo black brown (for the figures), Vallejo 70020 off white, Vallejo 70076 buff, Vallejo 70081 yellow green, Vallejo 70081 blue violet, Vallejo 70093 flat earth, Vallejo 70081 orange brown.

✓ Great subject. Comprehensive update/conversion kit, well researched and beautifully cast. Captures the look of this unique vehicle.

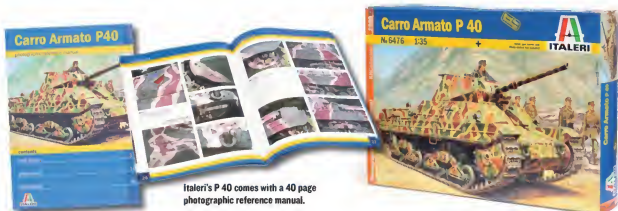
✗ Expensive way of getting a truly accurate ASLAV-25 Phase III.

### Available from

Trumpeter distributed in the UK by Pocketbond. Mouse House products are available online from [www.mhousest.com.au/MEH/MEHmain.htm](http://www.mhousest.com.au/MEH/MEHmain.htm)

Rating ●●●●●●●○





Italeri's P 40 comes with a 40 page photographic reference manual.

Who would have thought that we would see a 1:35 scale Italian P 40 heavy tank from a major manufacturer? The Editor takes a look at Italeri's latest all-new armour kit.

# ITALIAN HEAVY

**T**he Italian heavy tank Carro Armato P40 commenced development in 1940 following examination of a T-34/76 tank captured on the Eastern Front. In reality, with a combat weight of only 26 tonnes, the P40 was in the same class as Axis and Allied medium tanks.

The prototype was completed in July 1942 and an order was placed for 500 tanks in several variants, but only a handful had been completed by the time of the Italian armistice in 1943.

Although the sloped hull and turret seemed modern, by the time of its introduction the P40's specifications looked decidedly archaic. The bolted and riveted armour plates offered scant

protection for its crew, being vulnerable to anything more powerful than a British 2 Pdr. The 34 calibre 75mm main armament was inferior to the L48 and L70 75mm guns fitted to contemporary German tank guns. The simple suspension was reliable but did not permit the higher speeds of Christie-equipped vehicles such as the T-34.

The lack of a cupola also increased the risk to the Commander.

Despite these limitations, Germany ordered 150 P40s, of which Ansaldo eventually delivered around 100. These were mainly employed by SS and Police Command units, in addition to the SS Waffen-Gebrigs Division in the Friuli region, where they were used against Italian and Yugoslav partisans and British troops. 40 were also delivered without power trains and used as static defence bunkers during the Italian campaign.

Italeri has now released this interesting vehicle as a 1:35 scale injection moulded kit. The tan-coloured plastic parts are supplemented with a modest photo-etched fret, a turned metal main gun barrel and two acetate headlight lenses. Markings for three vehicles in German service are supplied.

The hull and turret are both multi-part, flat-packed assemblies. The bottom, sides, front and rear of the lower hull are separate parts, and the turret is similarly broken down. Rivets and other structural details are crisply rendered, and there are no obvious sink marks or ejector pins on externally visible surfaces or on the inside of poseable hatches.

Leaf spring suspension units are well done, and the drive sprockets are moulded with the characteristic raised cast "Fiat

Ansaldo" lettering on the hubs. Tracks are supplied as link and length, although the upper run will be completely concealed by the track skirts. I have not found a single photo that shows any of these skirts missing in wartime service, by the way. The tracks are especially well detailed, although they do suffer from very faint ejector pin circles on the inner face.

The sloping armour of the upper hull will have to be assembled from individual panels. The driver's visor is a separate part that may be posed open or closed. Side hatches on the engine deck may be positioned open too, but apart from handles on the inside of the hatches, there is no interior detail to be found on this model. This may be a clue towards a "high tech" future release.

Photo-etched parts are supplied for the muffler guards and side hull fittings. The clamp detail on the plastic pick and shovel are pretty clunky, but Italeri thoughtfully supplies replacements in photo-etch. A two-part plastic gun barrel is offered on the sprues, but you'd be mad not to use the very nice turned metal barrel also in the box.

The package is nicely rounded out with a 40-page reference manual that includes wartime photos, a couple of walkarounds of surviving vehicles and colour profiles. This is especially welcome for such a rare vehicle, making the package a one-stop reference and modelling stop.

The multi-part assemblies will require a bit more work than some other new releases, but Italeri's 1:35 Carro Armato P40 looks like a decent kit of a fascinating subject. ■

Thanks to Italeri for the sample  
[www.italeri.com](http://www.italeri.com)



The lower hull is old-school flat-packed multi-part. Detail is crisp.



The turret is also a multi-part assembly.



Engine deck grilles are open.



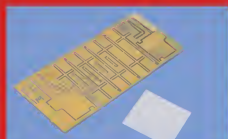
Tool and clamp detail is a bit basic, but optional photo-etched parts are included.



Tracks are a combination of individual links and lengths.



The tracks are well detailed inside and out.



A photo-etched fret is included, along with acetate headlight lenses.



Italeri supplies a turned metal gun barrel.



The three schemes are Italian, but the vehicle only saw service with German units.



The small decal sheet is in good register.





This is an adapted serialisation of the Osprey Masterclass book, "Airbrushing and Finishing Scale Models" by Brett Green, ISBN 978 1 84603 199 1. This hard-cover, ring-bound book is available online from Osprey Publishing at [www.ospreypublishing.com](http://www.ospreypublishing.com)



This instalment offers some hints on how to obtain a hard-edged camouflage finish using a variety of techniques.

## FINISHING SCHOOL

### PART FIVE – PAINTING A HARD-EDGED FINISH ON ARMOUR MODELS

**M**ore frequently than aircraft kits, military models will include multi-media external parts. These might include brass wire grab rails, photo-etched engine grilles and turned metal barrels. Resin conversions or even full kits are quite commonly seen too.

In these instances, a few additional preparation steps are advisable.

For resin kits and conversions, all the parts should be washed and

lightly scrubbed in a container of warm, soapy water to completely remove any trace of mould release agent that might interfere with paint adhesion.

Kits with metal parts should always be primed to offer some grip to the later layers of paint. Paint applied to bare metal – especially acrylic paint – can easily lift off during masking or even general handling without the "tooth" offered by a primer coat. There are specific metal primers

available, but a generic grey primer should do the job too.

After my armour model is primed, I like to start with a pre-shading coat of Flat Black paint. This makes painting the tracks and rubber tyres of the roadwheels easier, but more importantly the black paint will remain in natural shadow areas after the camouflage colours and weathering has been applied. For this reason, it is important to spray a very thorough coat of flat black that will penetrate all

the nooks and crannies of the suspension, the lower hull, the deep detail of track links and the hidden recesses of the rack guards, upper hull and turret.

We do not want to completely cover this black pre-shading coat, so the basic camouflage colour should be applied in fine misting coats from one or two consistent angles. Areas that would fall under natural shadows receive only a translucent layer of the camouflage colour. Tracks and the rubber tyres



▲ Tamiya's 1:35 scale Metzger was built straight from the box.



▲ The sole modification was extra texture applied to the gun mantlet and the exhaust. Tamiya Surfacer was applied to these surfaces and allowed to dry for a few seconds before stippling with a stiff paint brush.



▲ A thorough base coat of Flat Black was applied.



▲ The basic camouflage colour in this case, German Dark Yellow, was sourced from Gunze Sangyo's Aqueous acrylic range.



▲ All the tools, spare tracks, tow cables and other fittings have been installed prior to painting.



▲ Many Hetzers featured alternately coloured road wheels. The Green and Red Brown here come from the Polly Scale armour colour range.

of road wheels should be ignored. Don't worry if they are affected by overspray though, as we can easily touch up the black areas when camouflage painting is complete.

As an alternative to a black pre-shading coat, dark brown may also be used. This substitutes as an underlying layer of dirt and dried mud. Depending on how dirty the vehicle will be, there will be a greater or lesser amount of camouflage colour applied on the front, rear and sides of the hull.

Camouflage patterns are as varied on tanks and military vehicles as they are on aircraft. For soft-edged, multi-colour camouflage schemes, the disruptive colours should be thinned adequately to avoid overspray and spatter.

More so than aircraft models, our tanks and military vehicles will probably be supplemented with more techniques employing pencils, pastel chalks, oil washes and effects using the paint brush.

This section includes several illus-

trated case studies demonstrating different techniques for single and multiple camouflage colours, and the effects of both black and dark brown pre-shading coats.

#### PAINTING A HARD-EDGED GERMAN WWII AMBUSH SCHEME

I wanted to replicate the typically hard-edged camouflage of the Hetzer ambush scheme in 1/35 scale, but I did not want to completely brush-paint the camouflage, nor to mask the pattern. I was con-

cerned that brush painting would leave out-of-scale brush marks, while a masked pattern always looks, well, masked! I therefore decided on a middle route.

My canvas for this project was Tamiya's 1/35 scale Hetzer Mid-Production kit.

The first step was to spray the model in an overall coat of Tamiya XF-1 Flat Black. I was careful to reach every nook and cranny, including the nether regions of the lower hull and the insides of the ▶



▲ The first stage of tackling this complex scheme is outlining the camouflage pattern in dark brown artist's pencil.



▲ Polly Scale Panzer Green was thinned with water and carefully painted along the pencil border using a fine brush. This looks pretty rough at the moment.



# Tech Guide - Airbrushing and Finishing Scale Models



▲ The untidy lines are now joined by carefully spraying green into the appropriate gaps.



▲ The whole process is repeated for the Red Brown colour.



▲ One of the key features of the German ambush scheme is the small flecks of contrasting colours on the large blocks of camouflage.



▲ A selection of small shapes was painted on by hand using a fine brush. Dark Yellow flecks were added to the green and brown areas, while the dark yellow camouflage sports Panzer Green flecks.

◀ tracks. In addition to help identify imperfections before the camouflage colours are applied, this black coat will be a good base for the track colour and for deep shadows.

Next came the base camouflage colour. Out of the three camouflage colours, it is hard to tell which colour might have been applied first. I took a punt and chose Dark Yellow. Gunze-Sangyo German Dark Yellow was used for this coat.

I did not worry too much about

full coverage on the lower hull and tracks, but the upper hull was thoroughly covered.

Using Tamiya's instruction diagram as reference, the camouflage pattern was now drawn onto the green surface with a brown artist's pencil. This, in turn, acted as a guide to a brush-painted outline in each of the additional camouflage colours. At this stage the paint job looks pretty bad, and some serious self-discipline was required to continue!

Polly Scale acrylic Panzer Green and Vallejo Panzer Red Brown were used for these additional colours.

Skirts and smaller details were painted separately.

Now the painted outline was "coloured in" with the airbrush. The camouflage colours were heavily thinned and very carefully sprayed inside the painted outlines. This starts to improve the untidy finish, but not much.

At this stage I checked the pat-

tern against Tamiya's instructions and made several corrections to the pattern.

One of the key features of the ambush scheme is the small flecks of contrasting colours on the large blocks of camouflage. The shapes of these small flecks vary greatly from spots, to triangles, to rectangles, to less identifiable and random forms. A selection of small shapes was painted by hand on the vehicle using a fine brush.



▲ Some of these late-war Hetzers were marked with a simplified black cross on the hull. Using the kit decals as a guide, I cut out a mask and sprayed the cross on the vehicle.



▲ The result is a black cross with a slightly soft-sprayed edge.





▲ The entire vehicle was given a wash of Winsor and Newton oil paints heavily thinned with odourless thinners.



▲ The very thin wash left only subtle signs once dry.



▲ Various earthy shades of pastel chalk were ground down and mixed with mineral turpentine in a glass jar. The resulting sludge was used as mud and dirt on the vehicle.



▲ The sludgy mix was stippled onto the wheels, the tracks and the lower hull with an old brush.

Dark Yellow flecks were applied to the green and brown areas, while the dark yellow camouflage sported green flecks. Vallejo paints were mixed to match the main camouflage colours, thanks to their superior brush painting qualities.

Some of these late-war Hetzers were marked with a simplified black cross on the hull. I used the kit decals as a guide, cutting the black section of the cross out of the paper backing sheet and using

the reverse side of the sheet as a painting template.

The first stage of weathering involved a selective oil wash. Lamp Black and Raw Umber oil paints were heavily thinned with odorless thinners, then applied to rows of bolts, weld beads and other structural features. Some subtle vertical streaking was also brushed onto the hull. The wash was then left to dry overnight.

With the wash thoroughly dry,

I sprayed the entire model with Polly Scale Flat. I wanted a dead flat finish but this coat left a very slight sheen, so I applied a second coat with the same result. A third flat coat, this time using Gunze Flat Clear, finished the job nicely. With the basic paint job finished it was time to attend to the details. First, the tyres and tracks were touched up with flat black as required. Next, the machine gun, spare tracks, tools and exhaust were painted

with a fine brush.

I did not want to obscure the camouflage with weathering, but I did want to convey the impression of a vehicle that had seen some use.

Pastel chalk was used to give a slightly oxidised appearance to the gun barrel and the spare track links.

Dirt and mud were added to the wheels, tracks, lower hull and rear hull plate using a slurry of pastel chalk mixed with odorless thinners (mineral turpentine would do the



▲ The brown artist's pencil was used to add some horizontal scratches to the hull.



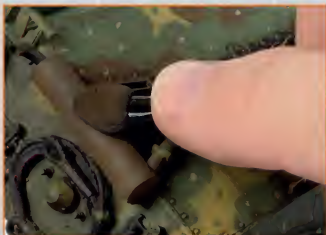
▲ A common 2B graphite pencil is handy for adding scratches and highlights. Here, the pencil is grazed along the edge of the forward armour plate to represent wear in this highly exposed area.



# Tech Guide - Airbrushing and Finishing Scale Models



▲ Tamiya's Weathering Pastels look suspiciously like a make-up container. Regardless of their origins, the pastels and their applicator are very effective.



▲ The reddish-brown "rust" pastel is rubbed onto the muffler.



▲ Excess mud was rubbed off the roadwheels.



▲ The end result is quite effective with a minimum of effort.

**"Paint applied to bare metal – especially acrylic paint – can easily lift off during masking or even general handling without the "tooth" offered by a primer coat."**



▲ The track pads were highlighted with the 2B pencil at high points where they would have come into contact with the road.



▲ Our ambush scheme takes advantage of the best attributes of the airbrush, the paint brush and even the humble 2B pencil.

◀ same trick). This mixture, once dry, won't rub off with handling. You can also mix different coloured pastel chalks to obtain variety in the finish. Do keep in mind, though, that the slurry is much darker when wet than it is when it has dried, so some experimentation on scrap material is advisable.

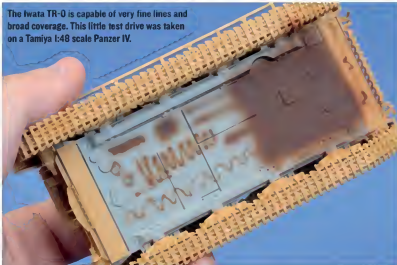
Tiny spots and streaks were drawn onto the surface of the vehicle using a brown artist's pencil. I tried this as I thought that my previous use of a lead pencil looked underdone in low light and overdone in bright light. I was pleased with the results using the

brown coloured pencil, especially the horizontal streaks on the hull sides and the skirts representing scuffing against branches and other obstacles.

I still used some 2B lead pencil though, for the edges of the major structural surfaces and handles. Lead pencil was also used for the shiny track shoes.

At last, after more than a few anxious moments, the camouflage was starting to come together.

A final thin coat of Gunze Flat Clear was applied to seal the pencil weathering. ■



# GO AHEAD, SPRAY MY DAY...

The Editor puts the Iwata Revolution TR-O trigger airbrush through its paces.

I am essentially a creature of habit. I have been using the same airbrushes for many years now, so when I was offered the opportunity to try something new, I was both intrigued and a little anxious. The anxiety was brought on by the rather unconventional configuration of the airbrush. Triggers are common on large spray guns, but not so on fine instruments such as this. Even so, it bore the Iwata name, so I knew the quality would be first rate.

The components are safely ensconced in custom-cut foam inside a sturdy plastic box. No chance of damage in transit here.

The airbrush itself is a chrome-plated jewel – the bling of the modeller's world. My eye was immediately drawn to the trigger. No secondary adjustments are present on the outside of this airbrush. I was very curious to see how this simple action would compare to the control

of a "push down, pull back" action airbrush.

But first I took a closer look at the package. A small wrench is included to remove the tiny air nozzle after the two-piece nose caps have been screwed off. The rear body cap simply unscrews to reveal the rear of the long needle. The needle chuck nut is easy to slacken off, and the needle slides effortlessly forward or back.

## ACCESSORIES

The Airbrush Company supplies this package with an in-line air filter. This is a very nice idea. Not only will the filter act as a water trap, but it extends the bottom of the airbrush, creating an effective "pistol grip" to ensure a natural trigger action.

Another optional extra available from The Airbrush Company is the Quick Release Body with Air Valve. These two parts are available separately but work together, and their purpose is twofold.

First, the air valve permits the modeller to adjust the airflow at the airbrush via a small round wheel. This will permit the airbrush to have full access to airflow for broad strokes (also useful for cleaning), or limit the pressure for very fine lines. I like this idea. It takes up for the lack of an air stop on the body of the airbrush itself, and it means that it will not be necessary to adjust the airflow at the compressor.

The Quick Release Body permits the airbrush to be snapped onto and off the air hose. This is especially handy if you are using more than

one airbrush. The Quick Release Body and Quick Disconnect Plug are available separately, so you can have a single Body attached to your air line and a Disconnect Plug attached to each airbrush.

There is a bonus benefit too. The Quick Release Body extends the "pistol grip", making it even more comfortable to hold between three finger and the palm.

## IN ACTION

Despite the simple trigger movement, this is still a double action airbrush.

With the TR-O hooked up to my compressor, I could not figure out why the air was not flowing, until I checked the adjustment of the valve on the Quick Release Body! With that operator error corrected, I found that the "pistol grip" was comfortable and natural, and that the trigger action was pleasingly positive. There is a noticeable "stop" between the air flow alone, and the introduction of paint to the mix.

The airbrush was tested on the bottom hull of a 1:48 scale Tamiya Panzer IV using Tamiya Red Brown acrylic paint thinned with around 70% isopropyl alcohol.

I found that the airbrush was capable of very fine and consistent lines, less than a millimetre, with restrained backward movement of the trigger and moderate airflow. With higher airflow and the trigger pulled all the way back, broad areas were quickly covered.

## CONCLUSION

I am very impressed with the Iwata Revolution TR-O so far. Stay tuned, as I will be using this airbrush on my next modelling project. I will report the results as soon as the paint has dried! ■



The Iwata TR-O airbrush breaks down into its components fairly easily. The rear body cap screws off, permitting the release of the long needle. The small wrench at the top of the picture releases the tiny nozzle.



An air filter is supplied as part of the package – a thoughtful touch



Here is the optional Quick Release Body with Air Valve. This is a useful way to adjust air pressure, and also offers a handy "pistol grip" for the airbrush when used in combination with the air filter.

Iwata airbrushes and accessories are available from The Airbrush Company Unit 7 Marlborough Road (East), Lancing Business Park, Lancing, West Sussex, BN15 8UF  
+44 (0)1903 767800, and online from their website [www.airbrushes.com](http://www.airbrushes.com)



The Iwata TR-O airbrush comes packed in a practical protective plastic box.



**DRAGON****1:3 FIREARMS SERIES - GLOCK 17 AND GUN CASE  
KIT NO: 1302 (WITH TORCH), 1301 (NO TORCH)**

Frag-weapon of choice for Jack Bauer in the TV series '24', the Austrian made 'Glock' was heralded as being a terrorist weapon due to the extensive use of composites in its design, yet it is now used by law enforcement agencies the world over. The pistol was also innovative for having a safety catch built into the trigger, ensuring that the weapon would not fire unless it was squeezed. As its popularity grew so did the choice of calibres, although 9mm remains the most popular.

Dragon's 1:3 scale kit also has a choice of versions, with the option of having a tactical light equipped model, or one without. An extended magazine version is due out soon. Cast on two sprues, plus parts for the frames and slides each kit builds two pistols and comes supplied with a neat carry-case for storage or display. One pistol is coloured in the traditional black finish, with one coloured in a 'desert shade'.

One-third might seem to be an odd scale for a model gun, but this size allows Dragon to incorporate the working features of the pistol without it being perceived as a realistic firearm. Dragon's Glock 17 does everything that the real one does except shoot.

The pistol cocks and the slide hold-open device functions. Even the trigger moves, with the kit being supplied with a tiny one-third scale bullet for the removable magazine. When cocked this tries to feed itself into the barrel.

As Dragon's 1:3 Firearms Series grows, I am sure that we will see some interesting model guns appearing, with the M14 rifle already having been released.

Highly Recommended.

Dragon kits are distributed in the UK by The Hobby Company Limited [www.hobbyco.net](http://www.hobbyco.net)

Ade Pitman

**NEW 1:16 SCALE RELEASES FROM  
WELSH DRAGON MODELS**

Alongside the new release boom in 1:35 and 1:72 scales, and the resurgence of models and accessories in 1:48, large scale models continue to be a popular niche. In addition to several recent releases in large scale from Tamiya including their excellent Panzer IV, KV-1 and KV-2, other companies including Heng Long from China have been keeping up a steady output.

A number of after market companies have popped up to cater for this interesting specialist market, with accessories and ambitious conversions available to large-scales. Welsh Dragon Models in the UK has started importing some of these exotic items.

All the following conversions and accessories are available online from Welsh Dragon Models [www.welshdragonmodels.co.uk](http://www.welshdragonmodels.co.uk)

**PROFILINE****1:16 SD.KFZ. 166 BRUMMBAR CONVERSION**

Profile's latest release is a 1:16 scale Sturmpanser Brummbär conversion for Heng Long's large scale Panzer IV Ausf. F2. It will probably fit Tamiya's new Panzer IV J, but some details will need beeing adapted.

The large conversion is packed in a stout cardboard box, and comprises 30 parts in pale green resin. Casting quality is very high, with no imperfections visible on my sample. Cleanup will be fast, as casting blocks and strips have been kept to a minimum.

The one-piece hollow-cast superstructure is the jewel in the crown – and it is about the size of a real crown too! The superstructure features recessed weld beads and crisp panel / hatch lines with raised hinges and structural detail where appropriate. Surface texture is otherwise smooth, so you have a nice big canvas to practice your skills at reproducing pitted rolled armour or (most appropriately) zimmer.

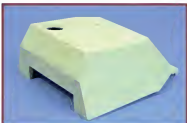
All hatches are moulded shut except for the round Commander's hatch. This could be posed open but some extra work will be required, as there is no detail on the inside of the hatch and the hinges have not been designed to fit in the open position.

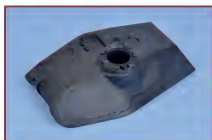
The remaining parts include stowage boxes, additional armour, hooks, driver's visor, tow shackles and of course the characteristic 15cm Sturmhaubitze (StuH) 43 1/2 in its spherical mount.

Instructions are provided on a CD, along with a stack of photos of the completed but unpainted model.

Profile's 1:16 scale Brummbär conversion should be quite straightforward to build, but will result in an imposing and unique model.

Recommended.





## PANZERSCHMIEDE

### 1:16 KING TIGER PORSCHE TURRET CONVERSION

Panzerschmiede's 1:16 scale King Tiger Porsche Turret conversion is supplied in black plastic. This large package is broken down into 36 pieces. Moulding quality is very good and all the parts have been removed from their main moulding sprues, although some waste material remains to be cleaned up on most parts. The two main parts are the upper and lower turret sections. Surface texture is smooth with raised and recessed structural detail where needed. Virtually all Porsche King Tigers had Zimmerit anti-magnetic paste applied, so it will be out with the putty and trowel for this project. The Commander's, loader's and rear hatches are all designed to be posed open if desired. The hatches themselves are moulded with interior detail. Smaller parts include a four-piece turret race armoured ring (nice touch that), main gun mantlet (moulded with subtle cast texture) and minor fittings. My sample was not supplied with instructions, but construction will be very straightforward. I assume that this conversion is designed to fit Heng Long's 1:16 scale Henschel Tiger II kit. The biggest question, the fit between upper and lower turret halves, was quickly answered by test fitting. The fit looks very good. Recommended.



## PANZERSCHMIEDE

### 1:16 WEAPONS AND ACCESSORIES

Panzerschmiede has released a number of 1:16 scale weapon sets. These include German Kar 98K rifle, MP40, StG44 and more. There are also kits available for the MG34 and MG42 machine guns, plus a separate photo-etched sight and a metal ammunition belt. Panzerschmiede also offers a good selection of 1:16 scale painted accessories. Pictured here we can see ammunition crates (including an 88mm crate with painted stencils), some clever folded tunics and great coats, fuel drums, Jerry cans, packs and a bucket. Except where otherwise noted, these are moulded in a hard vinyl material. These weapons and accessories will make great companions to 1:16 scale figures and vehicles as standalone models or in dioramas. Recommended.

Panzerschmiede and Profileline products are available online from Welsh Dragon Models' website [www.welshdragonmodels.co.uk](http://www.welshdragonmodels.co.uk)

**Blitz line sets from CMK - 1/35 and 1/48 scale**

<b>B35 059</b>  Correction Roof early version	<b>B35 060</b>  Correction Engine cover	<b>B35 061</b>  Correction Rear hull Armor	<b>B35 062</b>  Exhausts
<b>B35 063</b>  Correction Rear hull Armor	<b>B35 064</b>  Exhausts	<b>B48 065</b>  Road wheels rivet type late version	<b>B48 067</b>  BT-III School version Conversion set

U.K. website: [www.annants.co.uk](http://www.annants.co.uk)

Australia source: [sales@pacificmodels.com.au](mailto:sales@pacificmodels.com.au)

Visit an official website at [www.cmkkits.com](http://www.cmkkits.com)

CMK, Mexico 718 183 90 Praha 9, Czech Republic

A e-shop: [www.cmkkits.com](http://www.cmkkits.com)

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The new dedicated modelling website from Just Add Imagination



# Figures - A round-up of the latest figure sets on release...



## BRACH MODELS 1:35 SCALE LUFTWAFFE SENTINEL AFRIKA. ITEM NO. BM-M10

Brach Models is an Italian company that produces top quality and very original figures. Their subjects are mainly focused on Italian and German figures of WWII.

This 1/35 resin figure depicts a German Luftwaffe guard in North Africa. The soldier is shown refreshing himself by dropping his canteen of water over his head. The pose is very original and suggests the hard conditions of Africa. Casting is perfect and the figure will look great once painted. You might consider adding small drops of crystal clear resin over his head and clothes.

The most demanding figure modellers will say that the hands are oversized and the arms anatomically incorrect but, in my opinion, once carefully painted this will be almost unnoticeable.

Highly Recommended.  
Thanks to Brach Models for the review sample  
[www.brachmodel.it](http://www.brachmodel.it)  
José Brito

## AC MODELS

1:10 SCALE GRENADEIER FELDWEBEL. ITEM NO. ACM10808

1:10 SCALE BRITISH/Commonwealth SOLDIER (TRENCH WATCH). ITEM NO. ACM10809

AC Models may be one of the new kids on the block, but you certainly don't have to wait very long for new products. Here are two of their latest. First we have a bust of a German WWII Grenadier Feldwebel wearing the field grey uniform and side cap. There are three grey resin parts, being the base, torso and head. A small sheet of lead foil is also supplied to add straps hanging from the ammo pouches. Sculpting looks very nice, with no lack of detail. The way the side cap sits on the head is very natural.

When mounting the bust onto its base, I would suggest pinning it as well as gluing so that there is no risk of the bust falling off and being damaged.

I really like this bust and recommend it to all you budding large scale fans out there.

Next we have the British / Commonwealth soldier from WWI. He is wearing what appears to be a leather trench coat with webbing and a scarf of some sort, and a rifle slung over his shoulder, with bayonet fixed. A nice touch is the tilted helmet and the pipe hanging from the corner of his mouth.

Inside the box are four resin parts consisting of a base, torso with head attached, helmet and a section of rifle. There is also a nice white metal bayonet included, being which will be more robust than a resin part. Only minimal cleanup is required. As with other busts it is recommended to pin and glue when mounting the bust to the base. My only gripe is that I feel the face of this and the Feldwebel are very similar.

This is a very nice bust that should make all you WWI fans quite happy.

Highly Recommended.  
Thanks to AC Models for the samples.  
Andrew Judson



## BRAVO 6

1:35 VIETCONG SNIPER. ITEM NO. B6-35021

1:35 US AFV CREWMAN, VIETNAM. ITEM NO. B6-35012

Bravo 6 is a relatively new brand and they have not disappointed modellers yet. These two new sets are excellent additions to their range.

The first, the Viet Cong sniper, has a single figure of a sniper hunkered down low as if he is stalking his next victim. This would be perfect for a small vignette. He is wearing a camouflaged sniper's suit with a hood and minimal equipment so he isn't hindered whilst moving around silently.

In the box are six grey resin parts that look well cast with plenty of detail, though some care will be needed when removing parts from the holding blocks. I would not hesitate in recommending this figure to all those into figures.

The second figure set is a pair of Vietnam era AFV crewman, a commander and a driver, which I think would be great in a M113 APC, but other vehicles

would be fine as well. The commander figure is in a standing position, and would look great out of any hatch, but for the driver, an APC would be perfect, as he is in a seated position with his arms in a position for holding the steering controls.

The figures are packed separately, with a total of seven grey resin parts, all well cast, and will need minimal cleaning, plus a set of decals for all the uniform patches and rank. If you are planning a Vietnam era AFV, then this set is for you!

Highly Recommended.  
Thanks to Lucky Model for the samples [www.luckymodel.com](http://www.luckymodel.com)  
Andrew Judson





## ALPINE MINIATURES

1:35 WW2 RUSSIAN AFV CREW

SET. ITEM NO. 35092

1:35 WW2 US ARMY OFFICER SET.

ITEM NO. 35095

Alpine Miniatures has added several new 1:35 scale two-man resin figure sets to their growing range.

The first is their "WW2 Russian AFV Crew Set". The two figures are both dressed in long white sheepskin coats. The bodies of both figures are cast in a single piece each, with additional parts supplied for the arms, pistol holster and map case. The heads are separate too. In common with their usual practice, Alpine has supplied two heads for each figure – one tanker's helmet and one fur-lined cap.

The second release is entitled "WW2 US Army Officer Set". The two figures are both standing, one cross-legged and casual with a cigarette while the other is talking on a two-way radio – WW2's rather bulky equivalent of a mobile phone. The complex draped greatcoats are beautifully cast in one piece on the figure's bodies. Two heads are supplied for each figure in this set too, offering the choice of helmets or soft caps.

Now into its fifth year of business, Alpine Miniatures has built a strong reputation for its high quality sculpting and casting. These two new releases follow in the tradition of this fine standard.

Highly Recommended.

Alpine Miniatures products may be viewed on their website [www.alpineminatures.com](http://www.alpineminatures.com)

Brett Green



## AL SOLDATINO

75MM SCALE OFFICER OF THE GRANATIERI DI SAVOIA DIVISION, ITALIAN EAST AFRICA, 1940.

75mm is not the most common scale for 20th century military figure subjects, but it has its advantages. At nearly half as big again as a 1:35 scale figure, there is plenty of scope for additional detail and subtlety in the face and fabric; but the size is not so overwhelming as to overflow your display cabinet.

Al Soldatino has taken advantage of these benefits with their 75mm Officer of the Granatieri di Savoia Division, Italian East Africa, 1940.

The body, legs and head are all perfectly cast in pale yellow resin. The only casting attachments are on the bottom of the shoes, and these can quickly be removed with a sharp hobby knife. The officer is holding a riding crop in both his hands.

This is cleverly cast in place, so don't mistake the crop for some sort of casting strip – you'll be removing both arms and the crop as a single piece. The pith helmet is hollow, fitting over the figure's bald head (he'll need the protection from the tropical sun!), making it easier to paint the face before fitting the headgear.

A small desert base is also included.

Instructions are excellent. They are supplied on a two-sided sheet in both English and Italian, with reference photos of uniform details. A

separate colour sheet is also supplied with nice big photos of the painted figure.

Al Soldatino's 75mm Officer of the Granatieri di Savoia Division, Italian East Africa, 1940 is a unique product beautifully presented.

Highly Recommended.

Thanks to Al Soldatino for the sample. Email [annaandrea@ibero.it](mailto:annaandrea@ibero.it) for more details.

Brett Green



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# TRACKS BY SAND AND SEA

Jose Brito examines two new 1:35 scale kits from HobbyBoss providing amphibious transport in different eras.

## AAVP-7A1 W/UWGS

HobbyBoss' 1:35 scale AAVP-7A1 w/UWGS comprises twenty plastic sprue, large parts for the upper and lower hull, 90 separate plastic links for the tracks, a small photo-etched sheet, a small decal sheet and a short length of 50 millimetre string with a diameter of 0.8 millimetres. Besides all those parts, there are also top class instructions and a sheet with the marking and painting guide for the two possible schemes.

The AAVP-7A1 is big and being mainly a transport vehicle there are many hatches and open parts so HobbyBoss provides a full interior.

Building this kit will be very straightforward. The instructions are very clear and very well organized in seventeen steps. The building will, certainly, made mainly in subassemblies parts for an easy painting process. The separated plastic links will also add an extra touch of realism and certainly a much better option than the traditional vinyl tracks.

The small PE sheet, mainly with parts for the ventilation mesh, will improve these delicate details.

HobbyBoss provides decals for two different vehicles, one in the NATO style three colour scheme and another in a desert yellow colour. Sadly, HobbyBoss does not provide any information about those vehicles. The decal sheet also provides markings for the interior stencils.

The decals are top quality and crisply printed. They also react very nice to every known modelling decal solution.

The only real negative point is that the paraphernalia usually seen on these vehicles, like sacks, Jerry cans, boxes, barbed wire rolls, are missing. Figures are not included either. Even so, this is a great kit and highly recommended for all the modern armour fans. ■

## GERMAN LAND-WASSER-SCHLEPPER (LWS) MEDIUM PRODUCTION

I have already built two LWS kits - one from Bronco and the other from HobbyBoss (see Model Military International Issues 32, 33 and 38). Both kits are great and have positive and negative points.

I will therefore focus on the improvements that HobbyBoss has made in this new kit. The main differences are in the suspension, so most of the remaining kit parts are the same.

As usual from HobbyBoss, the kit is presented in a stout box with attractive box art. Inside the box you will find seven plastic sprues for the main parts, 12 sprues for the separate track links, an upper and lower hull, a photo etched fret, a decal sheet, die cut masks, a small rope, instructions in 11 steps and a colour marking guide.

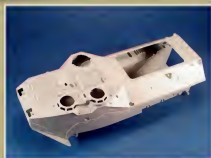
As far I can see, this new kit features two useful improvements when compared with the earlier release. Separate track links are now included. In the first model the tracks were one piece vinyl. Also, HobbyBoss now provides new tools and a jig to assemble the track links with the correct "track sag".

The interior parts are provided and the construction will be very straightforward. The decals are top quality and very well printed. The model can be built into two different colour schemes. Both models look awesome and will be a real pleasure to paint them. One of them, my favourite, have a mean shark mouth in the front of the vehicle and looks amazing.

However, there is one major flaw in the kit - the absence of the prominent bumper. I just cannot understand why HobbyBoss keeps releasing the LWS kit without that very visible part. Fortunately some detailing companies are releasing their own bumpers for the Bronco and HobbyBoss LWS.

Apart from this omission, HobbyBoss' 1:35 LWS is an excellent kit and a straightforward build. I recommend it heartily. ■

Thanks to Creative Models UK for the samples [www.creativemodels.co.uk](http://www.creativemodels.co.uk)



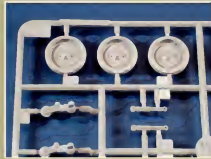
The large hull is supplied in upper and lower halves, easing assembly.



Photo-etched parts are mainly for the engine deck grilles.



Instructions are clearly laid out. This box includes a desert camouflage option.



Detail is crisply moulded.



Most of the hatches and doors are supplied separately, and may be posed open.



The large hull includes plenty of space for interior detail.



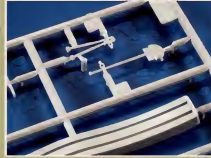
A modest photo-etched fret is included.



Most of the plastic parts are common with HobbyBoss' earlier LWS releases.



Individual track links are now included. This jig is used to ensure the correct sag for the top run.



Marking options include this uniquely camouflaged LWS.





### February 13

#### MODEL SHOW 2010

Model Show 2010 will be held on Saturday 13 February at the Fleet Air Arm Museum, RNAS Yeovilton, Ilchester, Somerset, BA22 8HT.

There will be a flying display by BMFA (British Model Flying Association), club exhibits, trade stands and open competitions. For more information please see the website [www.fleetairarm.com](http://www.fleetairarm.com) or phone 01935 840565

### February 27 - 28

IPMS Norway Nationals  
 IPMS Norway is holding its annual competition and exhibition at Letohallen near Gardermoen International Airport. This is the largest model competition in Scandinavia. Demonstrations and how-tos from both international and national modelbuilders will also be taking place.

For more information see [www.ipmsnorge.org/portal/](http://www.ipmsnorge.org/portal/). Questions regarding the show can be sent to [post@ipmsnorge.org](mailto:post@ipmsnorge.org)

We would like to welcome all types of modelbuilders from all parts of the world!

### February 28

#### SOUTH CHESIRE MILITAIRE 2010

The event features a host of stands and activities; club and trade stands intermingling in the main hall, whilst the upstairs gallery hosts the open competition, and a variety of other activities including radio control displays and demonstrations, artwork, wargaming and other modelling activities.

The show is open to the general public from 1000 to 1700. Competition entry closes at 1230.

Entrance to the show is £3.50 for adults, £1.50 for children under 16 years old and pensioners 65 years and older. Please check back near the date to confirm cost.

The show will be held at the Oakley Centre, West Street, Crewe, CW1 2PZ.

### March 6

The Greater Peterborough Model Show 2010 will be held on Saturday March 6th 2010 again in the town hall Peterborough. Once again proceeds from the show will go to the Mayors charities as in previous years.

### March 6

NORTH SOMERSET MODEL SHOW  
 North Somerset Modellers' Society (IPMS North Somerset) presents the 15th annual North Somerset Model Show at the Locking Castle Campus, Weston-Super-Mare, BS24 7DX.

Open 10.00am to 5.00pm with club displays, traders and a model competition. Free parking. Admission £2.00 adults, £1.00 children, £1.50 concessions.

For more information, please contact Fred Tooke on 01934 416798, or visit

[www.finetooth-systems.com/IPMSNorthSomerset/](http://www.finetooth-systems.com/IPMSNorthSomerset/)

### March 13

#### MILITARY IN MINIATURE

##### - ALDERSHOT

Aldershot Branch of the BMSS and affiliated BFFS present their annual model show, Military in Miniature.

The show will feature open

competition, displays, trade stands and refreshments. Military in Miniature will be held at Christ College, Bellfield, Guildford between 10.00 am and 4.00 pm on Saturday 13 March 2010.

### March 20-21

#### SOUTHERN EXPO 2010

Hornchurch Sports Centre, Harrow Lodge Park, Hornchurch Road, Hornchurch, Essex, RM11 1JU  
 10am to 5pm Saturday, 10am to 4pm Sunday.

Entry: Adults £3.00, Children £1 & Senior Citizens £2.

Open Competition (Sunday only) Raffles - All proceeds to St Francis Hospice.

For further details email [SouthernExpo@tiscali.co.uk](mailto:SouthernExpo@tiscali.co.uk) or see the website <http://myweb.tiscali.co.uk/southernexpo/>

### April 10

#### SWORD AND LANCE

Saturday 10th April: Sword & Lance 2010 presented by Darlington Military Modelling Society at the Arts Centre, Vane Terrace, Darlington DL3 7AX.

Doors open 10 am to 4.30 pm.

Model and Militaria displays, Demonstrations, Trade stands and Open Model Competition

with sections for:- Military Figure, Aircraft and Vehicle painters, Military Modelling (scratchbuilt/ conversion, vignettes and dioramas), Miscellaneous and Juniors.

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For further details, contact:

Colin Holmes, 127 Dinsdale

Crescent, Darlington, Co., Durham, DL1 1EZ. Tel. 01325 489801 or e-mail on [colin.holmes@whsmithnet.co.uk](mailto:colin.holmes@whsmithnet.co.uk)

### April 16 - 18

The IPMS/USA Region 11, Regional Contest and Modelfest, will be hosted by IPMS Space Coast, at the Holiday Inn, Oceanfront Resort, Cocoa Beach, FL. For details contact Mark Warthing at (321) 508-3743, before 9:00 pm, or e-mail [mwarthing@cflrr.com](mailto:mwarthing@cflrr.com). Visit the web site at [www.ipmsspacecoast.com](http://www.ipmsspacecoast.com)

### April 25

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[www.gatwickaviationsociety.org.uk](http://www.gatwickaviationsociety.org.uk)

### May 2

#### MOVELEO'S MODELFORCE '10

Moveleo Leopoldsborg will be presenting Model Force '10 on Sunday 2 May 2010 at the "Technisch Instituut Don Bosco" school complex, Don

Boscostraat 6, in the centre of Helchteren, Belgium. The show will be open from 10.00 till 17:00

and will feature club displays, traders, kid's corner, an open

modelling contest and food and refreshments. Entry to the show is free.

More information can be found at [modelforce.moveleo.be](http://modelforce.moveleo.be) or email [modelforce@moveleo.be](mailto:modelforce@moveleo.be)



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The books have been helping modellers to add essential details, find markings and apply paint schemes to aircraft, armour and ship models for many years, and the great news is that Squadron Signal books now are easier to find than ever before, because ADH Publishing, the company that brings you Model Military International each month, is importing them from the USA.

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German and Soviet Order of Battle. Illustrated with 59 black & white and 18 color photos, and 43 color drawings; 136 pages.

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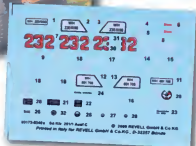
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## Small Scale A round-up of the latest news and releases in 1:72 and 1:76



### ITALERI

#### 1:72 M3 75MM HALF TRACK - WW II US ANTI TANK GMC. KIT NO. 7510

This is Italeri's anti-tank version of their M3A1 Fast Assembly Half Track and I must say that the model photo on the box front doesn't do the kit justice by any means. In the hand, the model is quite well detailed and of course you get two complete models in the box.

There are two sprues plus an upper hull for each. Detail is very good, especially for the chassis and tracks. There is only one part that looks like it may need gluing and that is the steering wheel to the column. Everything else will just click together. The one-piece track and suspension is particularly good, almost comparable with Academy's.

There is a small two page instruction sheet with just one build diagram done in the computer generated style but as there are only fifteen parts for each vehicle, which is plenty. The centre section has four paint/decal diagrams covering two American and two British M3s all in the MTO and the four profiles are repeated in colour on the reverse side of the box.

There is a small decal sheet with markings for the subjects. Printing looks first rate. These are very glossy and apparently, printed in China.

When they say Fast Assembly, there's not kidding. You could build a whole fleet of these in a weekend, including painting and decaling. Then there is the potential for beginners or conversion projects not to mention those that the kit is actually aimed at, wargamers.

Highly Recommended.

Italeri are distributed in the UK by The Hobby Company Limited [www.hobbyco.net](http://www.hobbyco.net)  
Thanks to Creative Models Limited for the review sample  
[www.creativemodels.co.uk](http://www.creativemodels.co.uk)  
Glen Porter



### REVELL

#### 1:72 SD.KFZ. 251/1 AUSF. C WITH WURFFRAHMEN 40

The Sd.Kfz. 251 family of light armoured half-tracks was based on the successful Sd.Kfz.11 artillery tugs and was used by German forces in every theatre of the war. The Ausf. C version was designed before the war and the 251/1 was the base vehicle used as an APC or gun towing vehicle and some had antitank guns, anti aircraft guns or rocket launchers mounted on them.

This new kit by Revell is not quite as detailed as Dragon's offering but will be far easier to build. With its link and length tracks and the ability to build the tracks, wheels and suspension as a unit, this kit should be suitable for even relatively inexperienced modelers. Compared to the Italeri (ex-Escj) 251, the mouldings are clean and flash free with no distortion and a lot more detail. The rear doors can be moulded open but considering the lack of interior detail against Dragon's model it may be better to leave them closed.

The Wurfrahmen 40 (rockets) are very well done with separate projectiles, launch frames and mounts. These will need to be painted before construction and some parts are very small so care will be needed. However, the kit can be built without the rockets as a standard Sd.Kfz. 251/1 Ausf. C.

If the Italeri kit was rated as 1 and the Dragon as 10, in my opinion, this kit from Revell would rate as an 8, not quite as good as Dragon's but far better than Italeri/Escj.

Recommended.

Thanks to Creative Models Limited for the review sample [www.creativemodels.co.uk](http://www.creativemodels.co.uk)  
Glen Porter



### ITALERI

#### 1:72 M4A2 SHERMAN III. FAST ASSEMBLY KIT NO. 7511

This is the latest in Italeri's Fast Assembly Range and contains two quick to assemble Mid Production M4A2 Shermans with an early M34 mantlet, co-ax armour shield and cast hood hull. The kit is made up of 13 parts. The tracks and running gear are moulded as one piece which clicks to mounting points on the hull. No glue is required to assemble these and it took me approx 10 minutes to assemble one. The detail is quite good for the scale and Italeri has captured the look of a Commonwealth/Polish vehicle well. All hatches are moulded shut and light fittings etc are moulded integrally to the hull but will look fine for a wargaming vehicle. A small amount of work and added detail will yield a very good M4A2.

Decals are provided for four vehicles, one British in Mud/Blue Black, one Polish 2 Corps in Italy, one US training example and a French example. The decals are probably the best I have seen for a Sherman in this scale and have a good range of options. They are pretty complete with the exception of AOS and formation squares for the British vehicle. The painting guide for the British example is incorrect (just leave off the brown) but the rest are fine. These are great projects for kids and perfect kits for wargamers, particularly with two to a box. The detail is far above the old Airfix Sherman so long the mainstay of Allied wargaming armies. Italeri are distributed in the UK by The Hobby Company Limited [www.hobbyco.net](http://www.hobbyco.net)

Highly recommended for wargamers, kids and Sherman kit bashers.  
Thanks to Creative Models Limited for the review sample [www.creativemodels.co.uk](http://www.creativemodels.co.uk)  
Alistair Bowie







# Letters

WRITE TO: MMI Letters, ADH Publishing, Doolittle Mill, Doolittle Lane, Totterhoe, Bedfordshire, LU6 1QX, UK  
Tel: 01525 222573 Fax: 01525 222574 Email: editor@modelmilitary.com  
The views expressed are not necessarily those of the editor or publisher.  
Letters may be edited for publication.

## AIRBRUSHES, FUTURE AND CORRECTIONS

I just had a few comments, corrections and questions on some recent articles that have appeared in Model Military International:

1. Where did you get the cap for your Paasche VL airbrush colour cup? I know the Paasche do not make one for this airbrush, so guess you found another brand's one that does the job! Certainly cuts down on accidental spills. If still available, I would like to try to get one myself.
2. In latest issue of magazine, Issue 44, you have carried forward a mistake from your book "Airbrushing and Finishing Scale Models" In your article Tech Guide: Finishing School, Part Two you discuss the ratio of white paint to add to colours for scale effect. Surely it should be 23 per cent for 1/144 scale models and only 7 per cent for 1/32 scale models!! Same transposition of ratios is shown on pages 18 and 19 of your Osprey book!
3. There has been a lot of recent discussion in the press recently about new formulae of Klear/Future, mostly by Australian modellers! On a recent visit to New Zealand, I found old and new products still on sale. The new

bottles look the same, but contents smell different and looks slightly cloudy. There is a distinct smell of ammonia in newer bottles. Needless to say I bought older bottles. What intrigued me the most however, was the fact that the bottles where labeled made in Australia. But Johnson & Johnson in their marketing wisdom does not sell Klear here, but exports it to New Zealand!

4. You referred everybody to the excellent article by Matt Swan. I would suggest anybody interested in this product check out the article at [www.swannysmodels.com](http://www.swannysmodels.com) Certainly the most detailed and informative article I have come across on the subject. There are some other very interesting article to view at this website too!
5. If anybody cannot get hold of Klear/Future locally, I know of at least one mail order source in USA, who will ship overseas, [www.Airline-Hobby.com](http://www.Airline-Hobby.com). They will sell you an whole bottle of the stuff. The bottle they sent me was labelled Pledge with Future Shine, but seems to be same as previous product called just Future! I ordered some myself, before my visit to NZ and although my parcel was opened by customs, they did

not confiscate the stuff. I wonder what they thought when I collected the parcel!  
I hope these comments and corrections are of some interest to you and your readers.

Best regards,  
Paul Gray

Ed says: Hi Paul, Thanks for the comments and questions.  
That Paasche VL was my very first

airbrush bought back in the mid-1980s. The cap definitely came with the airbrush way back then, but it is possible that the item has been deleted since.  
Regarding the ratios of white required for scale colour, yes, you are correct, the proportions have been transposed. Never had that pointed out before, so well spotted! Thanks for your interest and comments on the Future situation too.



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# SOURCING MATERIAL

I have been wandering around my local hobby shops recently with the view to purchasing material for my latest model. I have been bitten by the diorama bug and with this in mind have been scouring the shelves of the model railway section. I was astounded to find all manner of useful material that can [and will be used] for my latest 1:48 scale project. Bridges, buildings, stone walls, paving materials and windows can all be found in this treasure trove. You have to hand it to these railway guys - they have a lot of material that can be used in our particular branch of the hobby. I was particularly impressed with the level of detail on most of the items I was looking at. It should be remembered that most of the photo etch material that we now all take for granted can be directly traced back to the model railway fraternity. I was most interested in the model buildings section, sure, it's the wrong scale but with a little work it can be adapted to suit 1:48 Scale. Here is the rub, a lot of us will not even look at these sources because they are not labelled as 1:48 scale. My recommendation to you is to try different sources in a variety of scales to see if they work for you. Often they will produce outstanding results.

It is time for me to step up on my soap box once again and bring up the "black art" of scratch building again. Those of you who have read this column will have no doubt picked up that we don't do enough of it and in order for us to make the vehicles we would like to see in model form this will be the only alternative. I have approached the "Godfather" of armour modelling, George Bradford, with the view of having some of his excellent 1:48 scale drawings being published in this column. It is my view that this may encourage some of you to give scratch building a go. The drawings I have selected will give you a good start to produce a different version [or in some cases a completely different vehicle]. I will offer advice from what kit you may like to source many of the parts needed for the conversion. In some cases I will provide reference list that will aid you on the project.

The first of George Bradford's scale drawings will appear in Issue 48 of Model Military International magazine.

Until next time *Luke Pitt*

## Model Military International 1:48 Scale Q & A - Domingo Hernández

Domingo Hernández is the director of a private teaching institute in Tenerife, Canary Islands. Believe it or not, he has been making models for only six years. In the past three years, after meeting Luciano Rodríguez and Jose Luis Lopez, he has expanded into 1:48 scale armour, but his weathering methods are already at the top end of the "Spanish style". His models are a joy to behold.

### THE INTERVIEW

- Luke:** Hi Domingo. It is good to have you with us. What would you consider to be your best 1:48 scale model and why?
- Domingo:** *Hi Luke, thanks for inviting me to this interview. The model that I think is the most important has been the Buffalo MRAP from Gasoline. In the first place this was my first modern model and that presented a great challenge for me. On the other hand, the Gasoline brand trusted me to make a review of the model and introduced it to the world via the web. Finally the model pushed me to try some new techniques that have helped me develop in this hobby of ours.*
- Luke:** Domingo, you really did a first class job on that Buffalo and it's very difficult to tell its 1:48 scale. What is the most 1:48 influential scale model you have seen in print and why?
- Domingo:** *There are many models that have impressed me greatly and many modellers too, some very important and others not so well known. Perhaps the model that has impressed me most was the Tiger II by Diego Quijano in the special issue of the magazine "Tamiya 1/48 Military Miniature Book." The techniques applied, his desire to seek new techniques or implement some other type of modelling skills meant a lot to me. I think he's a very talented modeller.*
- Luke:** If you had to pick one kit that should be made in 1:48 scale what would that be?
- Domingo:** *It's hard, whenever I see a model in 1:35 scale that I like, I think of ways to do so in 1:48 scale and its potential to make it easy or a lot of energy and time. Perhaps the model that I would most eagerly want to appear in this scale is a German half track such as a FAMO or an Sd.Kfz. 7. These would have many possibilities in terms of scenes and diorama layouts. Basically I just love the look of the vehicles.*
- Luke:** Thanks for your time Dom. I am always inspired by your builds and know a lot of others are too.
- Domingo:** Thanks Luke and good luck with the column



## New Products

### TANK WORKSHOP

#### 1:48 LRDG CHEVY

I have mentioned this release a number of times in previous columns but Tank Workshop has now allowed me to post pictures of the master pattern of their forthcoming 1:48 scale LRDG Chevrolet. This is an outstanding looking vehicle crafted by the very talented hands of Alex Giersch. It will be great to have it in our scale of 1:48. The master pattern looks to be a groundbreaking piece of work. Tank Workshop has an enviable reputation for producing top drawer casting so I for one am looking forward to this release. The full kit should be released in March of this year and I will provide more details as they come to hand.



### KENGI

#### 1:48 M3 75MM HALF TRACK

Ken Swanson has released an M3 75MM Halftrack and from the photos it looks to be a winner.



## HAULER NEWS



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# Incoming

## TRISTAR

### 1:35 PZ.III/IV 40CM MID VERSION WORKABLE TRACK LINKS. ITEM NO. 052

Tristar has released a set of individual track links for Panzer III, Panzer IV, Stug. III and IV and their variants. This is the mid production 40cm version.

The track links are moulded as one piece each and are connected to the sprues via two thin attachment points at the front of the part. They are very fast and easy to remove and clean up. The guide horns are correctly moulded open. There are no imperfections [such as ejector pin marks] visible anywhere on the track links, although there is some fine flash here and there.

The links simply click together without glue, making it possible to drape and otherwise pose the track length when it is complete. I have snapped together five links myself, and they seem to work well. Fit is tight and accurate.

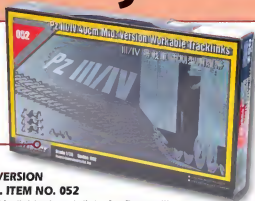
A total of 288 links are supplied in tan coloured plastic on the four sprues. This will yield plenty of spare links for future projects or impromptu armour for your Panzer.

Highly Recommended.

Thanks to Tristar for the sample

[www.tristar-model.com](http://www.tristar-model.com)

Brett Green



## TRISTAR

### 1:35 PZ.IV RUNNING GEAR SET 2 (EARLY AND MID VERSION). ITEM NO. 042

This is quite a remarkable and comprehensive set of running gear for early to mid production Panzer IVs and their variants. Many options are offered, including road wheels and bogies for the Ausf A-D or Ausf E and F, three styles of bogie caps, two styles of hub caps, two different sets of dampers, two styles of return roller, plus bent and straight leaf springs. Alternate drive sprockets and idler wheels are also included. The road wheels feature separate rubber rims, also in injection moulded plastic and featuring raised lettering on the outside edges. Final drive housings are on the sprues too.

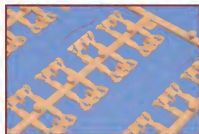
This set represents a serious upgrade for the running gear of your Panzer IV family kits.

Highly Recommended.

Thanks to Tristar for the sample

[www.tristar-model.com](http://www.tristar-model.com)

Brett Green



## HAULER

### 1:35 SCALE UPDATES FOR TAMIYA CITROEN 11CV BODY UPDATE PHOTO ETCH SET - ITEM NO. HLJ35019 RESIN WHEEL UPDATE - ITEM NO. HLJ35029

Hauler, traditionally known for its 1:48 scale photo-etch and resin upgrades, has released two updates for the Tamiya Citroen 11CV (kit 35301), or the light 15 as it was called in export markets.

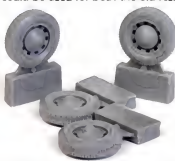
The first upgrade set is a small photo-etched set that includes the front grill, windscreen surround, engine hood vent covers, dash upgrades (including a photo negative for instrument cluster), windscreen wipers and number plate surrounds. All of this set is usable and done to a very high standard. The grill work in particular is very effective but will require the modeller to cut away the overly thick and out of scale Tamiya grill.

The second upgrade set is a resin replacement wheels set. These are the Michelin "Pilote" wheels introduced in the 1938 model year and unlike the Tamiya offerings have the correct tread pattern and are correct in diameter. The Tamiya kit parts are slightly too small in regard to side wall tyre height. The quality of the resin casting is first class and the castings have no air bubbles or warpage present. In a pinch, both of these upgrades could be used for both the old resin Des 11CV kit or the Matchbox kit of the Citroen Twelve Roadster. The wheels in particular are vastly superior to anything on the market today.

Highly Recommended.

Hauler products are available online from their website [www.hauler.cz](http://www.hauler.cz)

Luke Pitt



## MIG PRODUCTIONS

### FANTASY SERIES 1:35 KV-2X FULL RESIN KIT ITEM NO. F35-651

If you are into WW/II Russian armor and want something different to build, then look no further - Mig Productions has something that is sure to raise your eyebrows.

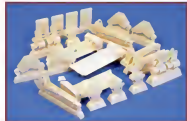
This is a kit based on a mixture of KV-2 and futuristic robotic spider resulting in a bizarre yet cool looking armoured creation that you wouldn't want to mess with.

Inside the box are 140 cream resin parts, all well cast and only needing minimal cleanup. A bag of clear tubing, a small length of fuse wire and a single double-sided colour instruction sheet, with clear photos and step by step guide that looks easy to follow supplement the resin parts. Painting and weathering will be the fun part, coming up with a scheme that will turn heads. Time to get that imagination going.

In my opinion this a great looking kit, though maybe not for everyone. However, if you are looking for something different, get one. I like it Highly Recommended.

Mig Productions are available online from their website [www.migproductions.com](http://www.migproductions.com)

Andrew Judson



## ULTRACAST

**1:35 WWII BRITISH EMPIRE STEEL MUNITION BOXES C.224 MK I. ITEM NO. 135016**

**1:35 WWII BRITISH EMPIRE STEEL MUNITION BOXES B166 MK II. ITEM NO. 135017**

**1:35 WWII BRITISH EMPIRE STEEL MUNITION BOXES B166 MK III. ITEM NO. 135018**

**1:35 WWII BRITISH EMPIRE STEEL MUNITION BOXES B167 MK.I. ITEM NO. 135019**

**1:35 WWII BRITISH EMPIRE STEEL MUNITION BOXES P59 MK.II. ITEM NO. 135020**

Canadian company Ultracast has been quietly beaver away over the last 15 years making high-quality figures and accessories for military and aircraft modellers with a particular commitment to Commonwealth WWII subjects. Their latest batch of five releases fall square into this category. These ammunition boxes will carry a wide range of ordnance and will suit either vehicles or dioramas. The Steel Munition Boxes C.224 Mk I set includes two boxes, while the other four sets include five boxes each.

Each box is attached to its casting block via a thin resin strip. This will be easy and fast to clean up using a new hobby blade.

All of these boxes saw their origins in the Second World War but many will still be valid for the post-war and Korean War eras. Indeed, the B166 Mk III box was dated 1945, so will be most relevant from the late-war period onward.

The parts have been mastered with research based on original ammunition boxes, and they do look very authentic.

Highly Recommended.

Ultracast products are available online from their website [www.ultracast.ca](http://www.ultracast.ca)

**Brett Green**



## MIG PRODUCTIONS

**1:35 ARAB GATE, ITEM NO. MP-35-107**

This Arab Gate from Mig Productions will be suitable for 1:35 scale dioramas from ancient times until the current conflicts in the Persian Gulf and the Middle East.

The gate is made up from seven pieces of resin, pre-coloured in a convincing shade of stone. Some washes and careful weathering will enhance this base finish nicely.

No instructions are included, but assembly is simple. In fact, the parts are ready to assemble straight from the box – no cleanup is required. The parts breakdown is so clever that the gate may be put together without glue. Test fitting the parts revealed that there will be two vertical joint lines that will need filling, but even these will be quite straightforward.

I have included a photo of the kit parts stacked together without glue, alongside Tamiya's 1:35 scale LRDG Chevy to give an idea of the scale.

Mig Productions' 1:35 scale Arab Gate is an impressive and versatile accessory that should be fun to paint and weather. Highly Recommended.

Mig Productions are available online from their website [www.migproductions.com](http://www.migproductions.com)

**Brett Green**



## DTOYS

**1:35 SD.KFZ. 7 WHEEL SET, ITEM NO. DT 35-011**

**1:35 LRDG / 30CVT CHEVROLET TRUCK WHEEL SET, ITEM NO. DT 35-012**

**1:35 US MODERN RATION MRE SET, ITEM NO. DT 35-013**

**1:35 HUMVEE AGGRESSIVE PATTERN WHEELS, ITEM NO. DT 35-015**

Dtoys is a relatively new company based in Korea that has just released a new batch of resin accessories.

Three of these are resin replacement wheels. All feature perfect casting and crisp detail, especially the deep tread patterns. Each wheel is cast into a narrow block, which will be easy to remove. There are two front wheels in the Sd.Kfz. 7 set, while the Chevy and Humvee sets supply two wheels for the front, two for the rear and one spare each. Each of the wheels is marked with its location on the casting block – a nice touch. The tyres for the Chevy and Humvee also feature raised sidewall lettering. Apart from the excellent detail, the other big advantage of these tyre sets is that the resin

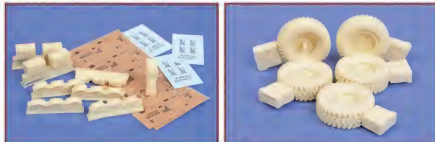
will not perish, unlike the vinyl on the kit parts that they replace.

The US Modern Rations set includes two sheets of brown cardboard with printed MRE boxes, plus resin rations and decals for the resin boxes. This will be a handy accessory for any modern vehicle vignette or diorama.

Highly Recommended.

Dtoys products are available online from Lucky Model [www.luckymodel.com](http://www.luckymodel.com)

**Brett Green**





# Book Reviews

## ISRAELI HALF-TRACKS VOLUMES 1 AND 2

BY TOM GANNON

ISBN 978-1-84768-001-3 AND 978-1-84768-002-0

PUBLISHED BY BARBAROSSA BOOKS

Modern Israel has always had a large standing armoured force, initially made up from whatever they could lay their hands on to defend their fledgling nation. Massive quantities of ex-WWII AFVs were sourced from scrap yards, friendly governments and other less legal means. Prominent amongst the large influx of materiel was the US halftrack in almost all the variants fielded during WWII. These vehicles formed the backbone of Israel's mechanised Infantry until the introduction of the ubiquitous M113 "Zelda" in the 1970s, which slowly supplanted the half tracks over the following decades.

Information on Israeli vehicles is hard to come by due to the security concerns of Israel a nation still technically at war with some of its neighbours. Over the last two decades more and more information has become available and many excellent books on the subject of Israeli AFVs have found their way to market. Tom Gannon, the author of this two volume set, has previously released a landmark title on Israeli Shermans and continues his study by devoting two titles to the IDF's workhorse from the 1950s to the 1970s, the half track.

The title of the set is misleading as Tom has included much more than just the half tracks. The first sections of the book are devoted to the early period "Sandwich Trucks", Armoured Cars, M3 Scout Cars, Captured Vehicles etc. Each volume is crammed full of good quality photos in both colour and monochrome, many seen in print for the first time and covering the rarer variants in detail.

Volume 1 is five chapters crammed into 172 pages covering the period up to 1959:

Chapter 1 – Half Track Primer – An excellent general reference and walk rounds of the original half track variants

Chapter 2 – Sandwich Trucks – Improvised armoured vehicles based on trucks used to supply the kibbutz's during the "Battle of the roads" up to and during the War of Independence

Chapter 3 – Armoured Cars 1948-59 – covering the varied collection of armoured cars used

Chapter 4 – Half-Tracks – General Use, 1948-59

Chapter 5 – Half-Tracks – Modified, 1948-59

Each chapter is well supported by excellent photos with informative captions plus narratives where required. Photographs are of period vehicles in and out of action and a large number of present day relics and museum pieces are included. The armoured car section gives an idea of the diversity of materiel with Daimlers, Marmon Herrington Mk IVs, Staghounds and various captured equipment.

The half track sections features in-action shots and covers the vast range of converted vehicles including the Cannon and Anti Tank variants in detail.

Volume Two picks up where Volume 1 left off (about 1959) up to the present day:

Chapter Six – Scout Car and AMIL 90 Armoured Car

Chapter Seven – Half-Tracks General use 1960- Present

Chapter Eight – Half-Tracks Modified 1960- Present

This book begins with a fantastic introduction providing a lot of the history and development of the Israeli half tracks post 1960. Like Volume 1, it is well supported by excellent photographs and covers even the most obscure and rare variants such as the SS 11 ATGW Missile HTs with a great collection of photographs. Again, action shots are supported by current day and museum shots with walk rounds of interesting variants like the light repair and communication Half Tracks.

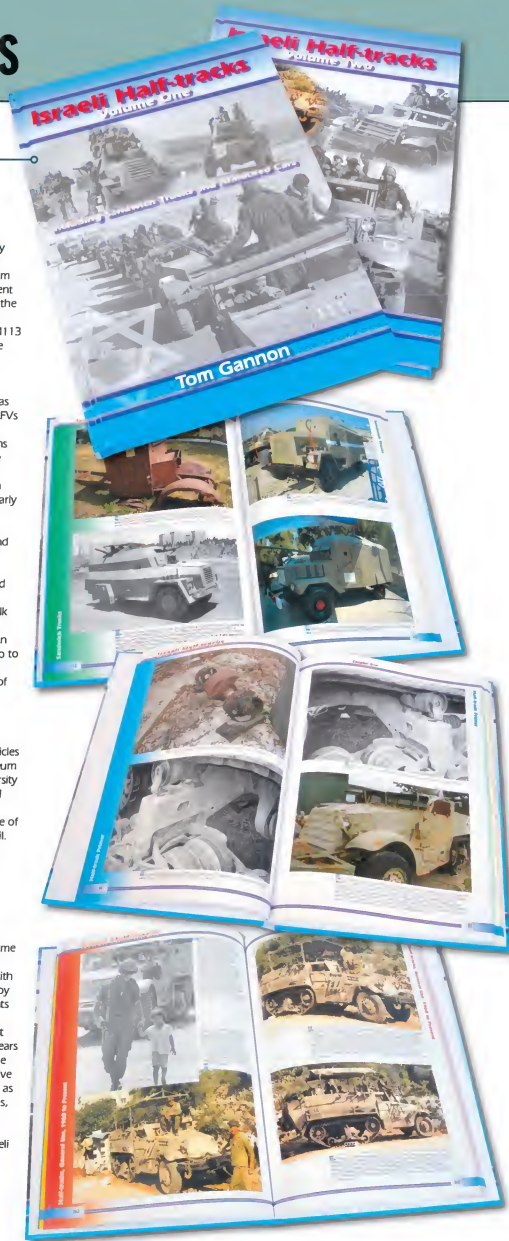
A visual feast of IDF AFVs awaits the purchaser, supported by excellent narratives and captions. These books have been promised for a few years now and looking at the quality of the research it explains the wait. The author has really studied the subject well and given us a comprehensive account of the service over 6 decades these vehicles provided in roles as diverse as troop carriers, ambulances, repair vehicles, anti-tank vehicles, convoy escorts, mine clearance, anti-aircraft, observation, command, engineering and many more.

These books are a must have for fans of the IDF and modellers of Israeli equipment.

Review sample supplied by Barbarossa Books.

Highly Recommended.

Alastair Bowie







## ONSLAUGHT - THE GERMAN INVASION OF SOVIET RUSSIA

BY KARL BERNÉ

THE OLIVER PUBLISHING GROUP

This book, the second from the Oliver Publishing Group in the Combat Camera Series, follows on from 'Panzers in the Bocage' and covers the early period of Operation Barbarossa, the Invasion of Soviet Russia.

The book is again essentially a collection of photos supported by a single colour plate and one monochrome plate. The source of these photos is cited as private collections taken by the actual soldiers themselves. The pictures are clear and presented in large format, usually 2-3 to a page allowing the reader to see the detail. The author has given a listing of the main German Armoured formations involved in Operation Barbarossa, but it provides little other information other than the captions which identify the units and equipment but not in all photos.

The colour plates cover early Sturmgeschütz III Ausf. B and Panzer III Ausf. G and H models. These are shown with detail insets where appropriate to display markings. The author has speculated where details are not clear but this has been declared in the text. Where units could not be identified the author has also stated so.

This book will appeal to fans of German armour, modellers and historians alike. It shows a side of the German armour different from the usual heroic propaganda pictures and offers many interesting diorama possibilities. If I have a criticism of the book it is the colour plates, or more so the number of them. One single plate is less than what I would have expected for a title such as this, particularly when one plate of Divisional insignia is in black and white. I would like to see a few more colour plates included.

I still recommend the title due to the photos contained within. Thanks for The Oliver Publishing Group for the sample.

Recommended.

Alistair Bowie



## CENTURION TANKS OF THE IDF

BY DR ROBERT MANASHEROB • ISBN: 978-0-9841437-0-2 • SABINGAMARTIN@PUBLICATIONS

The IDF have been masters at getting the best out of seemingly obsolete weapons platforms by modifying them to get what they want out of them. One of the most modern tanks available to the IDF in the 1960s was the British Centurion Mk.5, which was a match for anything in the Arab armies massed against it. Despite this, there were a lot of things about the Centurion known as the Shot (Whip) that the IDF (and a lot of other users) weren't satisfied with. Most of these centred on the Meteor engine and gearbox that were essentially throwbacks to the 1940s modification of the Merlin Aero engine. This engine was considered underpowered and thirsty giving the vehicle a short operational range. On top of this, the Cent is notoriously difficult to drive with a heavy clutch and manual gearbox. Having had the opportunity to drive a Meteor powered Centurion myself I can attest to the difficulty this must have presented in training crews and operating the tank in battle.

The Israelis analysed the tank, crews feedback and its performance in battle and set up a program to modernise the vehicle by upgrading the powerplant/ drive train using the same diesel engine as the M4A3 (already in service) coupled to an automatic transmission. The program was to commence in 1968 but the Six Day War placed a greater priority on IDF Ordnance Corps, that being to return the IDF to a battle ready state as fast as possible. Eventually the program got underway and the conversions started to roll out of factories and to the troops. It wasn't long before the Israelis had a chance to show the world just how good a tank they had created. In 1973 the Arab nations attacked Israel from all sides and the Israelis, with massive logistic and material support arriving by air from the US soon were on the offensive, had restored its territories and was poised strike into the heart of Egypt and Syria.

The Shot Kal (whip easy) had its baptism of fire during the Yom Kippur War and by then over 700 were in service. The 188th and 7 Armoured Brigades distinguished themselves on the Golan Heights in one of the greatest armoured defensive actions ever fought. The Shot Kal's were massively outnumbered but through excellent crew training tactics and the sheer tenacity of the Israeli tankers they overcame the Arab onslaught. The Shot Kal was the spearhead in all actions against the modern Arab T-62 and T-55s and it proved itself a superb MBT in the hands of the IDF's tankers. Up until now reference on Israeli equipment has been hard to come by but this is slowly being addressed by books such as this one which is part of an excellent and critically acclaimed series of books on the IDF's armour by Dr Manasherob. This is just the Shot series but I believe it is the first to be released.

This soft cover book exudes quality from its first pages. It starts with an excellent history of the Shot Kal genesis and development and progresses to a fantastic high quality photo gallery of the Shot Kals in action and in service. This is interspersed with text, excellent captions and superb scale drawings of the major variants in the vehicles development up to the end of the 1973 war.

A superb collection of colour walkarounds of various museum examples follows on and this leads into colour plates of 1973 war examples and finally a section on colours and markings.

The research that has gone into this must have taken years and the author's depth of knowledge bleeds from the pages. This is simply one of the best modelling references I have seen and is a must have to modellers of Israeli Shot Kal MBT's. This book will appeal to armour enthusiasts and historians equally and is not just for the modeller. I eagerly await further volumes and hope to see these grouped into hardbound volumes one day. The quality of the contents deserves it and while I had reservations about the high price locally one look at the contents had me emptying my wallet quick smart.

This is a first rate book and its hard to believe the Author has crammed so much and to such a high standard into the books 80 pages.

Highly recommended.

Alistair Bowie











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# Next Issue

On sale March 4th 2010

## Czech Mate!

Jose Brito presents CMK's  
1:35 scale Pz.Kpfw. 38(t) in  
Operation Barbarossa



## Animal Killer Part Two

Sam Dwyer modifies, paints and loads  
up Tamiya's new 1:35 scale ISU-152.



## Fitters Amtrack

Andrew Judson brings us the HobbyBoss  
AAVR-7A1 in 1:35 scale.



## Cherbourg in Small Scale Part One

Justo Mira recreates Cherbourg 1944 after D-Day in 1:72 scale.

### FOR YOUR SAFETY

Don't forget, when using  
solvents such as glues, paints,  
thinners and cleaning agents,  
always ventilate your work  
area thoroughly and wear a  
face mask.

When using power tools, side  
cutters or any tool that can  
suddenly break or create  
high-speed airborne particles,  
wear approved eye protectors  
with hard, clear lenses. Please  
always model in safety!



...and much more!

# Model MILITARY INTERNATIONAL

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both FSC and PEFC and carries the full accreditations  
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## CHECK THAT FILTER!

**J**ose Brito has been busy with modelling projects lately, as you will have noticed by his articles over the last few months. Like any responsible modeller, Jose uses a respirator when spraying paints and other potentially toxic substances.

However, he has sent a salient reminder that we mustn't be lulled into a false sense of security by the fact that we might be wearing a face mask. Jose sent a photo of one of the filters in his respirator after about a month of modelling, working around half an hour a day. This clogged filter would not be very effective at all!

So if you have a respirator that uses separate filters, remember to replace them regularly. If you are using a disposable mask, replace the whole thing as often as needed.



## THE BUTTERED-SIDE DOWN PRINCIPLE

My modelling table is usually crowded with dozens of bottles of paints, various thinners, decal solutions and more.

So why is it that the only one I ever seem to knock over is my bottle of Zip Kicker super glue accelerator, the most evil and smelly stuff that I have in a workshop full of glue and smelly stuff, and then only whenever the lid is unscrewed?

This must be the modeller's variation on the more general "battered-side down" principle, or perhaps Murphy's Law. Oh well, I will have to take more care to make sure that the lid is always screwed down in future. Just like I said the last 20 times!



## MORE PREVIEW PHOTOS ON MISSING-LYNX

If you would like to see more and larger photos of the parts from Tasca's 1:24 scale Panzer II Ausf. F and Tristar's 1:35 scale Sd.Kfz. 222, go to Missing-Lynx website [www.missing-lynx.com](http://www.missing-lynx.com) and follow the link to the "What's New" page. You will find the reviews and photos in the update dated 14 December.

## JOSE BRITO VIDEO PORTFOLIO

Jose Brito has put together a very creative video showcase of his prolific modelling output. Check out his figures and vehicles in large scale and small, all set to a rousing soundtrack. The video may be found at the following web page. <http://vimeo.com/8579657>

## EDITOR'S CHOICE ECHELON FINE DETAILS

There are nowhere near as many aftermarket decal companies producing alternative markings for military subjects than the teeming masses available for our aircraft-modelling brethren, but we are fortunate that there are some very high quality producers amongst this relatively rare breed.

Echelon Fine Decals falls into this category. In fact, they have also proven themselves to be quite innovative by expanding their product line to include items such as self-adhesive mirrors, clear vision blocks on die-cut acetate sheets and even printed modern camouflage netting.

They are best known for their decals though, and two of their most recent 1:35 scale releases cover Calvary Regiment Churchills at Dieppe.

Part One, Item No. ALT352010, covers all the Churchill tanks from B Squadron. Despite a sparsity of references, Echelon has still managed to comprehensively cover all these lavishly marked vehicles. There has been debate about the colour of tactical markings. Rather than plant their flag in a single camp, Echelon supplies both white and yellow tactical markings so you can make your own decision. Both tan and white Arm of Service numbers are supplied too, although both Echelon and Barry Beldam are pretty adamant that they should be white.

There are 17 possible subjects on this decal sheet, covering four marks of the Churchill, the Mk.I, II, III and OKE. Enough decals are supplied for four complete builds.

Part Two, Item No. ALT352016, covers all the tanks of C Squadron and Regimental HQ. All Churchills except one Mk.II named REGIMENT are covered on this sheet. The same comments about Tac and AOS colours apply here. This time, there are 11 possible subjects of three different marks (I, II and III) and once again enough decals are supplied for four complete builds.

While we are on the subject of Canadians at Dieppe, by the time you read this Echelon's new release, the rather breathlessly titled "Canadian Calgary Regiment's Dingo Scout Car Mk.II Markings During Operation Jubilee, Dieppe, France, 19 August 1942", will be available.

The long title thoroughly describes the subject matter. This release is especially welcome due to both the varied camouflage and markings on the seven featured Dingos, and also the availability of the excellent MiniArt kit (see Jose Brito's article in this issue).

All of these releases may be purchased online from Echelon Fine Details <http://home.pacific.net.sg/~kriegsketten/>





# StuG.III Ausf.G Early Production w/Schürzen

Engineered for modeling enjoyment

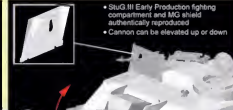
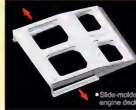
Plastic parts with enhanced detail

Unprecedented value

Ready for instant assembly!



- Side-skirt armor produced in metal for scale thickness



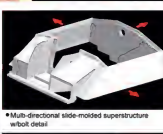
- StuG.III Early Production fighting compartment and MG shield authentically reproduced
- Cannon can be elevated up or down



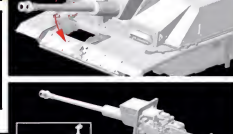
- All bolt heads on frontal armor shown at differing angles



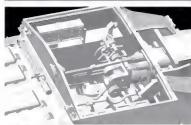
- Upper hull easy to assemble
- Multi-piece upper hull for maximum detail



- Multi-directional side-skirt armor without detail



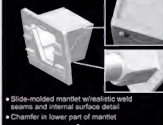
- Gun with breech assembly



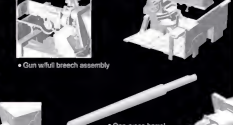
- Radio set and seats are included



- Driver's vision port w/clear plastic part
- One-piece driver's vision port armor without detail



- Slide-molded mantlet w/wheel-like weld scars and internal surface detail
- Chamfer is lower part of mantlet



- One-piece barrel



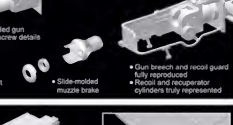
- Commander's hatch interior details can be assembled open/closed



- Steering brake inspection hatch can be modeled open/closed



- Roof armor w/accurate weld seams
- Screw heads accurately reproduced



- Slide-molded gun sleeve w/crow details

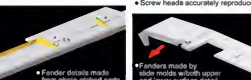
- Gun sight and hand wheels included
- Complete gun mount represented

- Slide-molded muzzle brake

- Gun breech and recoil guard fully reproduced
- Recoil and recuperator cylinders truly represented



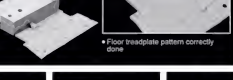
- Air-deflector realistically represented
- Photo-etched mesh included



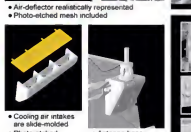
- Fender details made from photo-etched parts



- Fender pattern is accurately portrayed



- Floor treadplate pattern correctly done



- Cooling air intakes are slide-molded
- Photo-etched air-intake grills



- One-piece slide-molded lower hull w/crow details
- Lower hull sides w/full detail
- Fully detailed hull bottom weld seams



- Slide-molded torsion bars included



- Exhaust pipes w/hollow ends

- Smoke grenade launchers offer loaded or empty options

- Slide-molded periscopic gun sight made from clear part



- Detailed suspension swing arms



- One-piece slide-molded lower hull w/crow details
- Lower hull sides w/full detail
- Fully detailed hull bottom weld seams



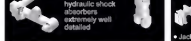
- Detailed track torsion adjuster
- Air wheels w/photo-etched parts



- Tool box w/airlock produced by slide molds

- Cable heads slide-molded

- Newly designed Nottak light



- Slide-molded hydraulic shock absorbers w/crow detail



- Jack is reproduced simulate parts



- OVA wheel-on-clamps



- Accurate sprocket wheels
- Final drive housing covers are made from separate parts for maximum detail



- 40mm Magic Trucks

D6365

Dragon Kits are distributed in the UK by The Hobby Company Limited, Knowlhill, Milton Keynes, MK5 8PG

See the full Dragon range at [www.hobbyco.net](http://www.hobbyco.net)

Dragon models are available from all good model shops

[www.hobbyco.net](http://www.hobbyco.net)

Mtl. SPW. Sd. Kfz.  
251/1 Ausf. D  
"STUKA ZU FUSS"

1/48  
MM



Length: 128mm

# Supporting the Armored Fist

1/48 Military Miniature Series  
Mtl.SPW.Sd.Kfz. 251/1 Ausf.D "Stuka Zu Fuss" Item 32566

The Mtl.SPW.Sd.Kfz. 251/1 Ausf.D was also called "Stuka Zu Fuss" as a reference to the Luftwaffe's Stuka dive bomber's great mobility, devastating noise, and destructive power. This variation of the half-track is the latest addition to join Tamiya's 1/48 Military Miniature Series. You can imagine the noise and smoke during rocket launches as you assemble the distinctive side-mounted launch frames. Also included to enhance realism are four figures which depict crewmen in various rocket preparation poses. You can display this set either on its own, or with diorama accessories and other German tanks such as the Panzerkampfwagen IV Ausf.J or Panther.

114th PzGr. Reg.,  
8th Pz. Div.,  
Eastern Front,  
Aug. 1944



Lgt. PzGr. Reg.,  
"Großdeutschland",  
Eastern Front,  
Aug. 1944



Kit includes three kinds of markings to depict vehicles which were painted in 3-tone camouflage schemes, including one that belonged to Panzergranadier Regiment's Heavy Company. Also included are decals to depict rocket markings.

Assembly model kit.



Soldiering On!

Item 32564

Also gracing the 1/48 Military Miniature Series lineup is the transport carrier variation of the dependable Mtl.SPW. Sd.Kfz. 251/1 Ausf.D



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